

**IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF TEXAS  
HOUSTON DIVISION**

|                           |                              |
|---------------------------|------------------------------|
| TRANSOCEAN OFFSHORE       | §                            |
| DEEPWATER DRILLING, INC., | §                            |
|                           | §                            |
| Plaintiff,                | §                            |
|                           | §                            |
| V                         | § CIVIL ACTION NO. H-13-1088 |
|                           | §                            |
| PACIFIC DRILLING, INC.,   | §                            |
| <i>et al.</i> ,           | §                            |
|                           | §                            |
| Defendants.               | §                            |

**MEMORANDUM AND ORDER CONSTRUING DISPUTED CLAIMS**

**I. Introduction and Summary of Claim Construction Ruling**

Transocean Offshore Deepwater Drilling, Inc. alleges that Pacific Drilling SA, Pacific Drilling Services, Inc., Pacific Santa Ana S.A.R.L., Pacific Sharav S.A.R.L., Pacific Drilling, Inc., and Pacific Drilling Operations, Inc. (together, “Pacific”) infringed three Transocean patents relating to rigs for offshore-oil exploration and drilling. Transocean seeks damages for, and an injunction against, Pacific’s alleged infringement and inducement of infringement.

The patents are: U.S. Patent No. 6,085,851 (the ‘851 Patent); U.S. Patent No. 6,047,781 (the ‘781 Patent); and U.S. Patent No. 6,068,069 (the ‘069 Patent). (Docket Entry Nos. 1, 5). The ‘851 Patent is the parent patent. The ‘781 Patent is a continuation of the ‘851 Patent, and the ‘069 Patent is a continuation of the ‘781 Patent.<sup>1</sup> The parties dispute how to construe terms in claim 10 of the ‘851 Patent, claims 10–13 and 30 of the ‘781 Patent, and claims 17–19 of the ‘069 Patent. (Docket Entry Nos. 43 & 43-1).<sup>2</sup> After the parties submitted tutorials, briefs, and

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<sup>1</sup> Transocean initially alleged that Pacific infringed a fourth patent, U.S. Patent No. 6,056,071, but Transocean no longer asserts that patent. (Docket Entry No. 43).

<sup>2</sup> The parties also disputed terms in claim 10 of the ‘071 Patent. “Transocean is no longer asserting Claim 10 of the ‘071 Patent.” (Docket Entry No. 43, at 1).

exhibits,<sup>3</sup> the court held a hearing under *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996),<sup>4</sup> at which counsel presented arguments supporting their competing claim constructions. On October 27, 2014, this court issued a Memorandum and Order in a separate case Transocean filed against a different defendant, Stena Drilling Limited, construing the same claims from the same patents. *See Transocean Offshore Deepwater Drilling, Inc. v. Stena Drilling Ltd.*, No. 4:08-cv-3287, 2014 WL 5460588 (S.D. Tex. Oct. 27, 2014). The parties in this case dispute the same claim terms and offer the same competing constructions as in *Stena*.

Based on the briefs, the record, the arguments of counsel, the applicable law, and the information gained from construing the same claim terms in the *Stena* case, the court sets out its construction of the disputed terms, as follows:

| Disputed Term   | Court's Construction  |
|---|---|
| <b>“a derrick”</b><br>(‘781 Patent, claim 10)   | “a single structure mounted upon a drilling deck that supports the load of drilling operations” |
| <b>“a drilling superstructure”</b><br>(‘851 Patent, claims 10, 12; ‘781 Patent, claim 30; ‘069 Patent, claims 17, 19)                 |   |
| <b>“tubular advancing station connected to said drilling superstructure for advancing tubular members”</b><br>(‘069 Patent, claim 17) | “an assembly of equipment capable of advancing tubular members to the seabed”                   |

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<sup>3</sup> Transocean filed a claim-construction brief, (Docket Entry No. 24), Pacific responded, (Docket Entry No. 26), Transocean replied, (Docket Entry No. 31), and Pacific surrePLIED, (Docket Entry No. 37). Before the *Markman* hearing, the parties submitted a revised joint claim-construction chart. (Docket Entry No. 43). The parties also submitted tutorials. (Docket Entry Nos. 22 (Transocean), 23 (Pacific)).

<sup>4</sup> The minute entry for the *Markman* hearing is at Docket Entry No. 45, and the transcript is at Docket Entry No. 48.

|   |   |
|---|---|
| <p><b>“means . . . for transferring tubular assemblies”</b><br/>(‘851 Patent, claim 10; ‘781 Patent, claims 10, 30)</p>   | <p>A means-plus-function term governed by § 112 ¶ 6.</p> <p><u>Function</u>: transferring tubular assemblies directly between advancing stations or indirectly through a setback envelope.</p> <p><u>Structure</u>: overhead derrick cranes, rail supported pipe handlers, or equivalent structure.</p> |
| <p><b>“assembly . . . operable to transfer tubular assemblies”</b><br/>(‘069 Patent, claim 17)</p>  | <p>A means-plus-function term governed by § 112 ¶ 6.</p> <p><u>Function</u>: transferring tubular assemblies directly between advancing stations or indirectly through a setback envelope.</p> <p><u>Structure</u>: overhead derrick cranes, rail supported pipe handlers, or equivalent structure.</p> |
| <p><b>“tubular handling system for transferring tubular assemblies between said first tubular setback envelope and said second tubular setback envelope and said first top drive station and said second top drive station”</b><br/>(‘781 Patent, claim 13)</p> | <p>A means-plus-function term governed by § 112 ¶ 6.</p> <p><u>Function</u>: transferring tubular assemblies directly between advancing stations or indirectly through a setback envelope.</p> <p><u>Structure</u>: overhead derrick cranes, rail supported pipe handlers, or equivalent structure.</p> |
| <p><b>a “well”</b><br/>(‘851 Patent, claim 10; ‘781 Patent, claims 10, 30; ‘069 Patent, claim 17)</p> <p><b>“the well”</b><br/>(‘851 Patent, claim 10; ‘781 Patent, claims 10, 30; ‘069 Patent, claim 17)</p>   | <p>“one or more wells”</p>  |

|  |   |
|--|---|
| <p><b>“drilling operations”</b><br/>           (‘851 Patent, claim 10; ‘781 Patent, claims 10–11, 30; ‘069 Patent, claim 17)</p> <p><b>“drilling activity”</b><br/>           (‘851 Patent, claim 10; ‘781 Patent, claims 10, 30; ‘069 Patent, claim 17)</p>   | “operations required to construct a well”                       |
| <p><b>“auxiliary drilling activity”</b><br/>           (‘851 Patent, claim 10; ‘781 Patent, claim 30; ‘069 Patent, claim 17)</p> <p><b>“drilling operations auxiliary to said drilling operations”</b><br/>           (‘851 Patent, claim 10; ‘781 Patent, claims 30, 30; ‘069 Patent, claim 17)</p> <p><b>“operations auxiliary to drilling operations”</b><br/>           (‘851 Patent, claim 10; ‘781 Patent, claims 10, 30; ‘069 Patent, claim 17)</p> <p><b>“operations . . . auxiliary to said drilling operations”</b><br/>           (‘781 Patent, claims 10–11)</p> | “operations removed from the critical path for drilling a well” |
|  |   |

The docket call scheduled for June 3, 2015, is cancelled. The parties are ordered to appear for a status conference on June 18, 2015, at 8:30 a.m., in Courtroom 11-B, 515 Rusk Avenue, Houston Texas, 77002.

The reasons for these claim-construction rulings are explained in detail below.

## TABLE OF CONTENTS

|      |  |    |
|------|--|----|
| I.   | Introduction and Summary of Claim Construction Ruling  | 1  |
| II.  | Background   | 6  |
| III. | The Legal Standards for Claim Construction   | 8  |
| IV.  | Analysis   | 12 |
| A.   | “Derrick” and “Drilling Superstructure”  | 13 |
| 1.   | Whether “derrick” is limited to a “single tower structure”   | 14 |
| 2.   | Whether the “derrick” is “mounted on a drilling deck”  | 16 |
| 3.   | Whether a derrick supports “the load of drilling operations” or the “weight of the tubular strings used in drilling”   | 21 |
| B.   | “Tubular advancing station connected to said drilling superstructure for advancing tubular members.”   | 22 |
| 1.   | The legal standard for a means-plus-function claim   | 22 |
| 2.   | Whether “tubular advancing station connected to said drilling superstructure for advancing tubular members” is in means-plus-function form   | 30 |
| C.   | “Means . . . for transferring tubular assemblies.”   | 39 |
| 1.   | Whether the claim covers indirect transfers  | 40 |
| 2.   | Whether the claims provide for transfers below the drill floor   | 46 |
| D.   | Additional tubular transferring terms: “assembly . . . operable to transfer tubular assemblies” and a “tubular handling system for transferring tubular assemblies between said first tubular setback envelope and said second tubular setback envelope and said first top drive station and said second top drive station.” | 52 |
| 1.   | “assembly . . . operable to transfer tubular assemblies.”  | 53 |
| 2.   | “Tubular handling system for transferring tubular assemblies between said first tubular setback envelope and said second tubular setback envelope and said first top drive station and said second top drive station.”   | 56 |

|   |    |
|---|----|
| E. "A Well" and "the Well" _____  | 58 |
| F. "Drilling Operations" and "Drilling Operations Auxiliary to<br>Said Drilling Operations" _____ | 63 |
| 1. The legal standard for indefiniteness _____  | 64 |
| 2. Whether the disputed claims are indefinite _____   | 66 |
| V. Conclusion _____   | 73 |

## **II. Background**

Conventional deep-sea oil exploration requires drilling a wellbore—a hole—in the seabed. The driller must alternate between drilling the hole and lining it with pipe. (Docket Entry No. 22 at 1–2). The bit used to drill the hole is suspended on a drill string made up of sections or “joints” of drill pipe. The parties call these joints “tubular members,” “tubular assemblies, or “tubular strings.” The tubular members are connected to each other on the drilling rig. Usually, a hoist apparatus called a drawworks<sup>5</sup> is attached to the drill string and raises and lowers it using a traveling block. As the hoisting equipment lowers the drill bit to the seabed, the drill string is lengthened. Transocean calls the location where this lengthening occurs a “tubular advancing station.” There, a rotary table grips and supports the suspended drill string, the traveling block is detached, and a new joint of drill pipe is connected to the string. The hoist is then reattached to the string, the rotary table releases its grip, and the drill string continues its descent to the seabed. Once the new joint has reached the drill floor, the process repeats. Downward progress halts as each new joint of drill pipe is added to the string. This process continues until the drill bit reaches the seabed.

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<sup>5</sup> “[T]he drawworks is a large winch that spools a heavy cable, called the drilling line.” (Docket Entry No. 23 at 3). The drilling line runs from the drawworks, over the crown block, and to the traveling block. (*See id*, figure depicting the structure).

The advent of the top drive, a large, powerful motor hung from the traveling block, expedited wellbore drilling. Drillers could add multiple joints of drill pipe, typically in “stands” of three, to the drill string at the same time. Before top drives, rotary-table rigs could attach only one 30-foot joint to the drill string at a time. The drill-pipe stands are preassembled and vertically stored in areas that the patents refer to as “setback envelopes,” located near the drilling stations. Pieces of equipment called iron roughnecks travel on tracks to and from the setback envelopes to thread the preassembled stands on the drill string.

Drilling begins when the drill bit reaches the seabed. The top drive attaches to the drill string and turns the drill bit.<sup>6</sup> The initial wellbore is drilled and the drill string is raised back to the surface. A string of casing pipe—a type of tubular steel—is then lowered to the seabed. The casing pipe lines the wellbore and provides structural stability. Lowering casing pipe to the seabed is frequently interrupted as additional joints of casing are added to the drill string.

Once the casing reaches the wellbore, it is cemented in place. This process is repeated as a slightly smaller but deeper hole is drilled and cased through the original cemented casing. (Docket Entry No. 22 at 8). When the wellbore reaches the intended depth, the driller installs a blowout preventer on the top, intended to prevent the uncontrollable escape of oil and gas from the well.

Like the drill string, the blowout preventer is connected to, and lowered from, the drilling rig by steel tubulars. These tubulars, called riser pipe, are thicker and heavier than drill pipe. The riser-pipe string acts as an umbilical cord between the well and the drilling rig. The size of the blowout preventer and riser means that lowering the blowout preventer to the well may take three days or more. (*Id.* at 9). Once the blowout preventer is in place, drilling continues through

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<sup>6</sup> A rotary table may also rotate the drill string and the drill bit. (Docket No. 22 at 3–4).

the riser pipe and blowout preventer until the wellbore is deep enough to reach the oil and gas deposits.

Conventional drilling rigs have a single drive and drawworks and can lower and raise only one string at time. Transocean's patent for a dual-activity drill rig claims a faster and more efficient drilling process by having multiple systems capable of simultaneously lowering and raising the drill string, blowout preventer, and riser. (*See* Docket Entry No. 5-1, '781 Patent, Figure 5; *id.* at 3:58–66). The dual-activity drilling rig is intended to reduce the overall time to complete the wellbore, making it financially more attractive for companies to incur the added time and cost required for deep-water drilling.

### **III. The Legal Standards for Claim Construction**

It is a “bedrock principle” that ““the claims of a patent define the invention to which the patentee is entitled the right to exclude.”” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). “[T]he construction of a patent, including terms of art within its claim, is exclusively within the province of the court.” *Markman*, 517 U.S. at 372. A court is to read the patent from the vantage of one with ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1313. That person ““is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field.”” *Id.* (quoting *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998)); *see also Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005) (cautioning courts not to interpret claim terms “in a vacuum” (internal quotations omitted)). Claim terms are ““generally given their ordinary and customary meaning,”” defined as “the meaning that the term would have to a person of ordinary skill in the

art in question at the time of the invention.” *Phillips*, 415 F.3d at 1312–13 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

When the ordinary meaning is readily apparent, claim construction “involves little more than the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314. If this meaning is not readily apparent, the court reviews “the intrinsic evidence of record, *i.e.*, the patent itself, including the claims, the specification and, if in evidence, the prosecution history.” *Vitronics*, 90 F.3d at 1582; *see also Am. Piledriving Equip., Inc. v. Geoquip, Inc.*, 637 F.3d 1324, 1331 (Fed. Cir. 2011) (“[T]he role of a district court in construing claims is . . . to give meaning to the limitations actually contained in the claims, informed by the written description, the prosecution history if in evidence, and any relevant extrinsic evidence.”). The court first looks “to the words of the claims themselves, both asserted and nonasserted, to define the scope of the patented invention.” *Vitronics*, 90 F.3d at 1582. Claims must be construed in context of the surrounding claim language. *ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003) (“[T]he context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of those terms.”).

The Federal Circuit has repeatedly stated that “claims ‘must be read in view of the specification, of which they are part.’” *Phillips*, 415 F.3d at 1315 (quoting *Markman*, 52 F.3d 967, 979 (Fed. Cir. 1995)). The specification is a “‘concordance for the claims’” and the “‘best source for understanding a technical term.’” *Id.* (quoting *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 397–98 (Ct. Cl. 1967); *Multiform Desiccants*, 133 F.3d at 1478); *see also Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1360 (Fed. Cir. 2004) (“In most cases, the best source for discerning the proper context of claim terms is the patent specification wherein the patent applicant describes the invention.”).

The specification is examined “to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning.” *Vitronics*, 90 F.3d at 1582. When the specification “reveal[s] a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess . . . the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316. “In other cases, the specification may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor.” *Id.*; *see also Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (explaining that claim construction may deviate from the ordinary and customary meaning of a disputed term only if (1) “a patentee sets out a definition and acts as his own lexicographer, or (2) the patentee disavows the full scope of a claim term, either in the specification or during prosecution”).

“The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Phillips*, 415 F.3d at 1316 (quoting *Renishaw PLC v. Marposs Società per Azioni*, 158 F.3d, 1243, 1250 (Fed. Cir. 1998)). “There is a fine line between construing the claims in light of the specification and improperly importing a limitation from the specification into the claims.” *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011). Courts must “capture the scope of the actual invention, rather than strictly limit the scope of claims to disclosed embodiments or allow the claim language to become divorced from what the specification conveys is the invention.” *Id.*

“[A] court ‘should also consider the patent’s prosecution history, if it is in evidence.’” *Phillips*, 415 F.3d at 1317 (quoting *Markman*, 52 F.3d at 980). The prosecution history “can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making

the claim scope narrower than it would otherwise be.” *Id.*; *see also Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1381 (Fed. Cir. 2011) (“[T]he specification is the primary source for determining what was invented and what is covered by the claims, elucidated if needed by the prosecution history.”). The prosecution history includes “all express representations made by or on behalf of the applicant to the examiner to induce a patent grant, or . . . to reissue a patent. . . . includ[ing] amendments to the claims and arguments made to convince the examiner that the claimed invention meets the statutory requirements of novelty, utility, and nonobviousness.” *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985); *see also Sanofi-Aventis Deutschland GmbH v. Genentech, Inc.*, 473 F. App’x 885, 888 (Fed. Cir. 2012) (“We have held that an otherwise broadly defined term can be narrowed during prosecution through arguments made to distinguish prior art.”); *Phillips*, 415 F.3d at 1317 (“The prosecution history . . . consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent.”).

Courts may, within limits, also “rely on extrinsic evidence, which ‘consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.’” *Phillips*, 415 F.3d at 1317 (quoting *Markman*, 52 F.3d at 980). Although extrinsic evidence “‘can shed useful light on the relevant art,’ it is ‘less significant than the intrinsic record in determining the legally operative meaning of claim language.’” *Zircon Corp. v. Stanley Black & Decker, Inc.*, 452 F. App’x 966, 972–73 (Fed. Cir. 2011) (quoting *Phillips*, 415 F.3d at 1317). As explained in *Phillips*, extrinsic evidence is “in general . . . less reliable than the patent and its prosecution history” for several reasons. *Phillips*, 415 F.3d at 1318. Extrinsic evidence is “not part of the patent” and was not created during the patent prosecution. *Id.* “[E]xtrinsic publications may not be written by or for skilled artisans.”

And expert reports and testimony created for litigation may “suffer from bias that is not present in intrinsic evidence.” *Id.*

“[E]xtrinsic evidence may be useful to the court, but it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1319. Such evidence must not relegate the intrinsic evidence to a mere “check on the dictionary meaning of a claim term.” *Id.* at 1320; *see also id.* at 1321 (noting that relying on dictionaries “too often” causes “the adoption of a dictionary definition entirely divorced from the context of the written description”). “The sequence of steps used by the judge in consulting various sources is not important; what matters is for the court to attach the appropriate weight to be assigned to those sources in light of the statutes and policies that inform patent law.” *Id.* at 1324.

This legal framework is applied to the parties’ competing constructions of the disputed claim terms.

#### **IV. Analysis**

The parties disagree over which disputed terms must be construed. Transocean argues that only a few disputed terms require construction because Pacific infringes its patents even if the court adopts Pacific’s constructions for the other disputed terms. Pacific argues that all the disputed terms require construction.

In *Transocean v. Stena Drilling Ltd.*, 4:08-cv-3287, 2014 WL 5460588 (S.D. Tex. Oct. 27, 2014), this court construed all of the same disputed terms in the same Transocean patents. The court issued definitive constructions for all but three disputed terms and tentative

constructions for the three terms.<sup>7</sup> The lawyers representing the defendant in that case, Stena, also represent Pacific in this case. They advance nearly identical claim-construction arguments. Although carefully considering the differences in the two cases, the claim-construction analysis and rulings in *Stena* provide useful guidance and allow efficient construction of each of the disputed terms in this case. The parties agree that the same terms should be consistently construed. (See Markman Hearing Trans., Docket Entry No. 48, at 7 (counsel for Pacific stating that it would “be fine if [the court] appl[ies] the same constructions from the *Stena* case in this case” and stating that the parties “certainly would” view the court’s constructions in the *Stena* case “as having the same construction in this case”); *id.* (counsel for Transocean stating that there “wouldn’t be an issue in this case” after the court construed the same terms in *Stena*).

#### A. “Derrick” and “Drilling Superstructure”

| Transocean’s Proposed Construction  | Pacific’s Proposed Construction  |
|---|--|
| “A structure mounted upon a drilling deck that supports the load of drilling operations.” | “A single tower structure that supports the weight of the tubular strings used in drilling.” |

The terms “derrick” and “drilling superstructure” appear in claims 10 and 30 of the ‘781 Patent, claims 10 and 12 of the ‘851 Patent, and claims 17 and 19 of the ‘069 Patent. The parties agree that “derrick” and “drilling superstructure” have the same meaning and that the patents use them interchangeably. (See Docket Entry Nos. 24, at 19; 43-1, at 1). Both are referred to as “derrick.”

The parties have two primary areas of disagreement in construing “derrick.” The first is whether a “derrick” is limited to a tall “single tower structure,” as opposed to a broader range of

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<sup>7</sup> Those terms are (1) “tubular advancing station connected to said drilling superstructure for advancing tubular members,” (2) “assembly . . . operable to transfer tubular assemblies,” and (3) “tubular handling system for transferring tubular assemblies between said first tubular setback envelope and said second tubular setback envelope and said first top drive station and said second top drive station.” *See Transocean*, 2014 WL 5460588, at \*2.

“structures” not limited to tall towers. (Docket Entry No. 31, at 15). These other structures could include connected frames and other support assemblies. The parties agree that the Transocean patents cover only a single derrick, (Docket Entry No. 31, at 18), but Transocean does not agree that the single derrick must be a tall tower, as Pacific argues. The first dispute is whether a “single derrick” is limited to a tall tower.

The second area of dispute is whether a “derrick” encompasses all the support structures, including the base or support structure below the drill floor, or whether “derrick” is limited to the structure located above the drill floor, excluding the base or support structure. Transocean wants to include the structure below the drill floor; Pacific does not. (Docket Entry No. 31, at 15; 26, at 29).

A third and less critical dispute is whether the “derrick” supports “the load of drilling operations” or “the weight of the tubular strings used in drilling.” Transocean argues that the derrick supports the weight of the drilling operations; Pacific would limit it to supporting the weight of the tubular strings used in drilling.

Each dispute is analyzed below.

*1. Whether “derrick” is limited to a “single tower structure”*

Pacific’s proposed construction of “derrick” is a “single tower structure,” similar to the four-legged tall-tower derrick in the specification. (Docket Entry No. 26 at 27). Transocean’s proposed construction would not limit the claimed invention to a tall tower.

The specification states that the invention is not limited to a four-sided tall derrick similar to that shown in Figure 5 of the ‘851 Patent. The specification states: “in a preferred embodiment, the multi-activity support structure is in the form of a four sided derrick.” ‘851 Patent, 8:14–15. The next sentence states that the invention “is intended to include other

superstructure [derrick] arrangements such as tripod assemblies or even two adjacent upright but interconnected frames.” *Id.* at 8:15–18 (brackets added). The reference to tripod assemblies and adjacent upright interconnected frames is a representative, not a comprehensive, description of the types of structures that can be the “derrick.” Pacific has not pointed to language in the specification or claims limiting this broad description. The intrinsic evidence supports Transocean’s construction.

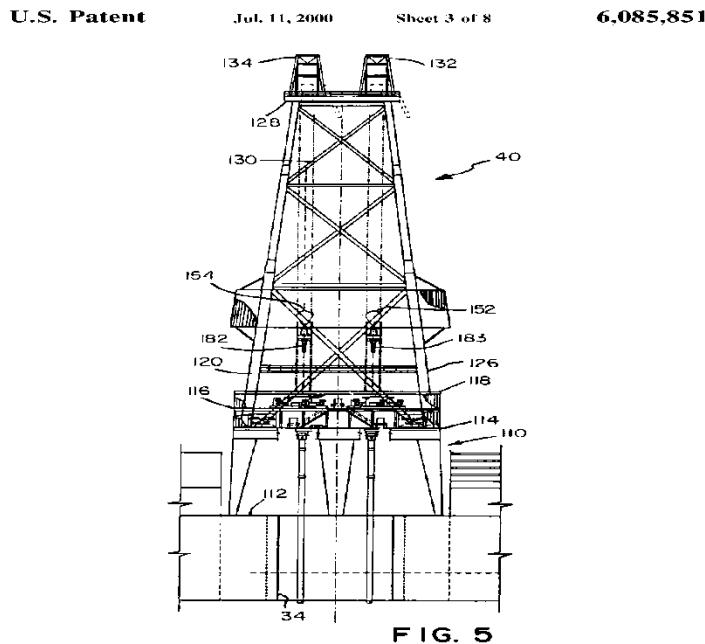
Pacific relies on the preferred embodiment of a four-sided derrick to support its argument that a “derrick” is limited to a “tall tower.” (See Docket Entry No. 26 at 27 (“The specification, including the figures, is clear that the derrick 40 is a tower structure.”)). Pacific contends that the tower must be “tall” based on the fact that “the [pipe] casing stands are up to 125 feet long,” requiring a tower at least that high to accomplish the recited advantage. (*Id.*). But courts have “expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004); *see also MySpace, Inc. v. GraphOn Corp.*, 672 F.3d 1250, 1255 (Fed. Cir. 2012) (“[L]imitations from parts of the written description, such as the details of the preferred embodiment, cannot be read into the claims absent a clear intention by the patentee to do so.”). Pacific has not shown why the fact that the tubular assemblies can be up to 125-feet tall necessarily limits the derrick structure to a “tall tower.” The record does not show that a mast or structure other than a tower could not handle 125-foot tall tubular assemblies. The fact that the preferred embodiment is a four-sided tall tower does not limit the claim to that embodiment.

The term “derrick” is not limited to a “tall tower structure.”

2. *Whether the “derrick” is “mounted on a drilling deck”*

Transocean contends that “derrick” means a structure “mounted upon a drilling deck.” Pacific argues against including “mounted upon a drilling deck” in the definition. Although Transocean’s proposed construction first appears more restrictive, it is not. Construing “derrick” as the structure “mounted upon the drilling deck” includes the base or support structure both below the drill floor and above the drilling deck in the definition. Construing “derrick” without the “mounted upon a drilling deck” language excludes the base and support structure from the definition.

The preferred embodiment provides helpful context. Figure 5 from the ‘851 Patent, shown below, shows the preferred embodiment of the “derrick” as mounted on a drillship substructure or drilling deck.



In this embodiment, the drill floor (114) is located above the base (110). Transocean contends that its construction results in defining the derrick (40) to include the base (110) that extends below the drill floor (114) and above the drilling deck (112).

The specification and claims support Transocean’s argument that the base (110) is part of the derrick (40). The specification states that “[t]he derrick 40 *includes* a base 110 which is joined to the drillship substructure 112 symmetrically above the moon pool 34.”<sup>8</sup> *See* ‘851 Patent, 6:21–23 (emphasis added). Referring to diagrams showing the multi-activity derrick sequence of operations, the specification states that the derrick is “positioned upon a drilling deck.” *Id.* at 8:33–34. Figures 9–22 are consistent with construing “derrick” as on the drilling deck, not just above the drilling floor. In Figure 13, the derrick (40) is the only structure on the drilling deck that the figure identifies; the base (110) legs are shown but the base is not identified. If “derrick” did not include the base and support structures below the drill floor, the base shown in Figure 13 would likely be separately identified and labeled.

Pacific argues that the figures showing the operations sequence are not useful for determining the derrick’s structure because the figures “are meant to depict dual activity, not the construction of the derrick, and are applicable to a variety of platforms.” (Docket Entry No. 26, at 30). Pacific does not explain why the fact that the figures are in the “Method of Operation” section of the specification is a reason to discount the specification’s statement that “derrick 40 [is] positioned upon a drilling deck 190.” *Id.* at 8:33–34. This language is consistent with other sections, specifically, the “Multi-Activity Derrick” section stating that “[t]he derrick 40 includes a base 110.” *Id.* at 6:21–22.

The references to “drilling superstructure” in the independent claims also support Transocean’s proposed construction. The parties agree that “drilling superstructure” is synonymous with “derrick.” Some of the disputed independent claims refer to a “drilling superstructure . . . mounted upon a drilling deck.” *E.g.* ‘851 Patent, 14:21–22, claim 10 (“a

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<sup>8</sup> “Drillship substructure” is synonymous with “drill deck.”

drilling superstructure operable to be mounted upon a drilling deck); ‘781 Patent, 18:14–15, claim 30 (same). This is the same as claiming a “derrick” “operable to be mounted upon a drilling deck.” The claim and specification language are persuasive intrinsic evidence that “derrick” includes the “base.”

To support its construction, Pacific relies on prior art cited in the patents, which “constitutes intrinsic evidence.” *Kumar v. Ovonic Battery Co.*, 351 F.3d 1364, 1368 (Fed. Cir. 2003); *Tate Access Floors, Inc. v. Interface Architectural Res., Inc.*, 279 F.3d 1357, 1371–72 n.4 (Fed. Cir. 2002). This evidence “can have particular value as a guide to the proper construction of the term, because it may indicate not only the meaning of the term to persons skilled in the art, but also that the patentee intended to adopt that meaning.” *V-Formation, Inc. v. Benetton Grp. SpA*, 401 F.3d 1307, 1311 (Fed. Cir. 2005) (quoting *Arthur A. Collins, Inc. v. N. Telecom Ltd.*, 216 F.3d 1042, 1045 (Fed. Cir. 2000)).

The Transocean patents refer to prior art in which “derrick” did not include the base or support structure below the drill floor. One Transocean patent, U.S. Patent No. 6,056,071,<sup>9</sup> lists U.S. Patent No. 4,602,894 in the “References Cited” section. The prior-art ‘894 Patent separately describes the “derrick” and the structures supporting it. (Docket Entry No. 26, Ex. 36, 3:5–9 (describing a “sub-base . . . support[ing] a superstructure upon which the derrick . . . [is] mounted”). Another prior-art patent, U.S. Patent No. 3,279,404, describes the “derrick platform” or support structure below the drill floor separately from the “derrick,” which covers only the structure above the drill floor. (*Id.*, Ex. 37, fig. 1, 3:28–29). The prior-art ‘404 Patent, like the Transocean patents, contains an embodiment with upright support columns acting as a base supporting the drill floor, and with structures mounted on the drill floor. The use of “derrick” in

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<sup>9</sup> The ‘071 Patent is a child application of the ‘851 Patent. Transocean no longer asserts that Pacific infringed this patent.

the prior art is intrinsic evidence supporting Pacific’s argument that “derrick” does not include the base below the drill floor. As far as the court can determine, Transocean has not cited prior art defining “derrick” to include the base or support columns below the drill floor.

Pacific’s prior-art references are insufficient to support its proposed construction, however, given the specification and claim language supporting Transocean’s competing construction. *See Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001) (quoting 35 U.S.C. § 112 ¶ 2) (“In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use to ‘particularly point out and distinctly claim the subject matter which the patentee regards as his invention.’”). First, as noted above, the specification in the Transocean patents states that the “derrick” includes the “base.” In contrast, the prior-art patents did not expressly define “[t]he derrick [to] include[] a base.” *See* ‘851 Patent, 6:21. The Transocean patent claims state that the “drilling superstructure,” which is synonymous with “derrick,” is “mounted upon the drill deck,” which is below the drill floor, meaning that the derrick includes the base.

Second, while the Transocean patents cite the prior-art ‘894 and ‘404 Patents, the specification mentions only the ‘404 Patent, and does so as an example of how the drillship can be “turret moored.”<sup>10</sup> The specification did not refer to the ‘404 Patent to explain the meaning of “derrick” and does not indicate whether the “derrick” includes the base. The ‘404 Patent’s use of “derrick” provides little help in determining whether the Transocean “patentee[s] intended to

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<sup>10</sup> Pacific’s response also mentions U.S. Patent No. 4,850,439, U.S. Patent No. 3,001,594, and UK Patent 2,291,664. (Docket Entry No. 26, at 30). These patents are listed only in the “References Cited” section. These patents, like the ‘894 Patent, are not mentioned in the specification.

adopt th[e] same meaning” of “derrick.” *See V-Formation*, 401 F.3d at 1311 (internal quotations omitted).

As to extrinsic evidence, Pacific cites treatises defining “derrick” to exclude the base or substructure on which it sits. For example, *The Primer on Offshore Operations* states that a “standard derrick has four legs standing at the corner of the rig’s substructure.” (Docket Entry No. 26, Ex. 41, Ron Baker, *A PRIMER OF OFFSHORE OPERATIONS* 43, 109 (3d ed. 1998); *see also id.*, Ex. 28 Ron Baker, *A PRIMER OF OFFSHORE OPERATIONS* 173 (6th ed. 2001) (defining the “standard derrick” as having “four legs standing at the corners of the substructure and reaching to the crown block”); *id.*, Ex. 30 *A DICTIONARY FOR THE OIL AND GAS INDUSTRY* 16 (1st ed. 2005) (same). This supports Pacific’s argument that a person of ordinary skill in the art would understand a “derrick” and the base or substructure on which it rests on as two distinct structures. Transocean has not identified extrinsic evidence defining “derrick” as including the base or substructure.

The extrinsic evidence Pacific cites, however, must be viewed “in the context of the intrinsic evidence.” *Phillips*, 415 F.3d at 1319. Extrinsic evidence is “less reliable than the patent . . . in determining how to read claim terms.” *Id.* at 1318. Intrinsic evidence is the principal source for claim construction and, when clear, overrides contrary extrinsic evidence. The clear intrinsic evidence weighs strongly in favor of construing “derrick” to include the “base.” The extrinsic evidence Pacific cites is insufficient to overcome the specification and claim language clearly defining “derrick” to include the base.

The court construes the claim terms “derrick” and “drilling superstructure” to include the “mounted upon a drilling deck” language Transocean proposes.

3. *Whether a derrick supports “the load of drilling operations” or the “weight of the tubular strings used in drilling”*

The parties agree that “load” and “weight” have the same meaning and are used interchangeably. (Docket Entry No. 37 at 14). The parties dispute whether “derrick” means a structure that supports the “weight of the tubular strings used in drilling,” as Pacific argues, or a structure that “supports the load of drilling operations,” as Transocean contends.

Pacific argues that Transocean’s proposed construction is ambiguous because “drilling operations” is imprecise. According to Pacific, the term “drilling operations” is so broad as to include drilling mud pumps, blowout preventers, riser pipes, roughnecks, and possibly even a ship’s galley. (Docket Entry No. 26 at 29). Pacific contends that the inventions concern a narrower range of “operations” closely related to drilling the wellbore. Pacific notes that most of the equipment used to construct the wellbore—which includes the drill pipe, drill bits, casing pipe, riser pipe, and the blowout preventer—is attached to the derrick by tubular strings.

Transocean responds that Pacific’s proposed construction is too narrow. Although tubular strings attach most of the drilling equipment to the derrick, that is not true of all drilling equipment. Some drilling equipment can be lowered and raised using wirelines attached to the derrick, making Pacific’s construction underinclusive.

The court agrees that Pacific’s construction is too narrow and that Transocean’s is not improperly ambiguous. Transocean’s construction does not exceed the range of operations relating to drilling the wellbore or the claim boundaries. The weight or load that the derrick supports is construed to mean the “load of drilling operations,” not merely the “weight of the tubular strings used in drilling.”

The court construes “derrick” and “drilling superstructure” to mean “a single structure mounted upon a drilling deck that supports the load of drilling operations.”

B. “Tubular advancing station connected to said drilling superstructure for advancing tubular members.”

| Transocean’s Proposed Construction   | Pacific’s Proposed Construction   |
|--|---|
| An assembly of equipment capable of advancing tubular members to the seabed. | <p>A means-plus-function claim governed by § 112 ¶ 6.</p> <p><u>Function:</u> advancing tubular members</p> <p><u>Structure:</u> equipment for hoisting (drawworks, cable, sheaves, and a traveling block), equipment for making-up and breaking down tubular strings (combination of an iron roughneck, pipe tong, spinning chain, a Kelly and/or rotary swivel), and optionally equipment for rotating tubular strings (top drive or rotary table).</p> |

In 2014, this court in *Stena* construed the same claim terms from the same patents, issuing a tentative ruling on the disputed term in claim 17 of the ‘069 Patent and allowing the parties to file supplemental briefs responding to the court’s questions and concerns. *See Stena*, 2014 WL 5460588, at \*11; *see also id.* (No. 4:08-cv-3287) (Docket Entry Nos. 117, 119). Transocean and Stena settled before the court could issue a final ruling, but the tentative rulings and the supplemental filings in *Stena* are useful guidance.

Transocean asserts that the disputed claim term, “tubular advancing station connected to said drilling superstructure for advancing tubular members,” is properly construed as a means-plus-function limitation subject to 35 U.S.C. § 112 ¶ 6. Transocean argues that the claim denotes sufficiently definite structure to avoid § 112 ¶ 6. The court agrees with Transocean.

1. *The legal standard for a means-plus-function claim*

The Federal Circuit has consistently held that “[m]eans-plus-function claiming applies only to purely functional limitations that do not provide the structure that performs the recited

function.” *Welker Bearing Co. v. PHD, Inc.*, 550 F.3d 1090, 1096 (Fed. Cir. 2008) (alteration in the original) (quoting *Phillips v. AWH Corp.*, 415 F.3d at 1311 (Fed. Cir. 2005)). Under 35 U.S.C. § 112 ¶ 6, “[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof.” Means-plus-function claims do not cover all possible means for performing the stated function. Instead, they are “construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” *Phillips*, 415 F.3d at 1309.

Courts treat claims using the term “means” as “invok[ing] a rebuttable presumption that § 112 ¶ 6 applies.” *CCS Fitness Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002); *see also Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004). If the claim does not use the term “means,” “a rebuttable presumption that § 112 ¶ 6 does not apply” is triggered. *CCS Fitness*, 288 F.3d at 1369. “[T]he presumption flowing from the absence of the term ‘means’ is a strong one that is not readily overcome.” *Lighting World*, 382 F.3d at 1358; *see also Flo Healthcare Solns., LLC v. Kappos*, 697 F.3d 1367, 1374 (Fed. Cir. 2012) (“When the claim drafter has not signaled his intent to invoke § 112 ¶ 6 by using the term ‘means,’ we are unwilling to apply that provision without a showing that the limitation essentially is devoid of anything that can be construed as structure”).

“The use of the term ‘means’ is central to the analysis, because the term ‘means,’ particularly as used in the phrase ‘means for,’ is part of the classic template for functional claim elements, and has come to be closely associated with means-plus-function claiming.” *Lighting World*, 382 F.3d at 1358 (internal quotations and citations omitted). The presumption in favor of construing a claim using the word “means” as a § 112 ¶ 6 “means-plus-function” claim is based on the statutory language “that an element in a claim for a combination ‘may be expressed’ as a

means for performing a function,” which gives the patentee the choice of the means-plus-function claiming. *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1584 (Fed. Cir. 1996). “The question then is whether, in the selection of claim language, the patentee must be taken to have exercised that option.” *Id.*

The disputed claim term “tubular advancing station . . . for advancing tubular members,” does not use the word “means.” Pacific acknowledges that the presumption is against applying § 112 ¶ 6. *See Lighting World*, 382 F.3d at 1358; (Docket Entry No. 26 at 38). To overcome the presumption, Pacific must present or identify evidence in the record showing by a preponderance that “the claim term fails to ‘recite sufficiently definite structure’ or recites a ‘function without reciting sufficient structure for performing that function.’” *Lighting World*, 382 F.3d at 1358 (quoting *CCS Fitness*, 288 F.3d at 1369).

Several cases from the Federal Circuit are instructive on whether the drafter invoked § 112 ¶ 6 for claims that do not use the word “means.” The cases include *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580 (Fed. Cir. 1996); *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354 (Fed. Cir. 2004); *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206 (Fed. Cir. 1998); *Massachusetts Institute of Technology (“MIT”) v. Abacus Software*, 462 F.3d 1344; (Fed. Cir. 2006); and *Welker Bearing Co. v. PHD, Inc.*, 550 F.3d 1090 (Fed. Cir. 2008).

In *Greenberg*, the Federal Circuit examined a patent for endo-mechanical surgical instruments, which are thin surgical instruments inserted into the body through small openings. 91 F.3d at 1580. The court held that the claim term “detent mechanism defining the conjoint rotation” was not subject to means-plus-function claiming under § 112 ¶ 6. *Id.* at 1584. The court focused on the word “detent,” which modified “mechanism” in the claim. Looking to dictionary definitions, the court found it “clear that the noun ‘detent’ denotes a type of device

with a generally understood meaning in the mechanical arts, even though the definitions are expressed in functional terms.” *Id.* at 1583. The court acknowledged “that the term ‘detent’ does not call to mind a single well-defined structure, but the same could be said of other commonplace structural terms such as ‘clamp’ or ‘container.’” *Id.* After the term “detent mechanism,” the drafter set out the structure defining the “detent mechanism,” and did not use functional language to do so. When viewed in the context of the specification, the modifier “detent” recited structure, not function. *Id.* at 1584 (“A close reading of the specification reveals, however, that the term is used in that portion of the patent simply as a shorthand way of referring to each of the key structural elements of the invention.”).

In *Lighting World*, the Federal Circuit reversed the trial court’s ruling that the term “connector assembly for connecting each pair of adjacent support members” was in means-plus-function form. The appellate court held that the claim did not use “means” and that one of ordinary skill in the art would understand “connector” to denote structure. The trial court had reasoned that “in order to be regarded as structural for purposes of section 112 ¶ 6, a claim limitation must identify a specific structure and not use a generic term that includes a wide variety of structures.” 382 F.3d at 1359. The Federal Circuit found the district court’s interpretation “unduly restrictive.” *Id.* The term “connector assembly” provided sufficient structure and the presumption against means-plus-function construction stood. *Id.* at 1360–63.

The Federal Circuit did not hold in *Lighting World* that the term “assembly,” standing alone, described a structure. Rather, the term “connector,” with and modifying “assembly,” described a structure. The court relied on dictionary definitions, finding that “connector” had a “reasonably well-understood meaning as a name for structure.” *Id.* at 1361 (noting the dictionary definitions of “connector” as “any of various devices for connecting one object to another” and

“connect” as “to join, fasten, or link together . . . by means of something intervening”). The court construed “connector assembly” in the claim to “mean[] a unit that joins, fastens, or links each pair of adjacent support members.” *Id.* The court explained:

In considering whether a claim term recites sufficient structure to avoid application of section 112 ¶ 6, we have not required the claim term to denote a specific structure. Instead, we have held that it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function.

*Id.* at 1359–60.

The court elaborated, noting that “‘the fact that a particular mechanism . . . ‘means for performing a specified function’ within the meaning of section 112(6).’” *Id.* at 1360 (quoting *Greenberg*, 91 F.3d at 1583). It did not matter “that the term ‘connector assembly’ does not bring to mind a particular structure.” *Id.* The important inquiry was “whether the term is one that is understood to describe structure, as opposed to a term that is simply a nonce word or a verbal construct that is not recognized as the name of structure and is simply a substitute for the term ‘means for.’” *Id.*

The court in *Lighting World* reaffirmed the strong presumption that a claim limitation not using the word “means” is not in means-plus function form. The court stated:

[I]t is not surprising that we have seldom held that a limitation not using the term “means” must be considered to be in means-plus-function form. In fact, we have identified only one published opinion since *Greenberg* in which we have done so, and that case provides a useful illustration of how unusual the circumstances must be to overcome the presumption that a limitation lacking the word “means” is not in means-plus-function form. Th[at] exceptional case is *Mas-Hamilton*.

*Id.* at 1362; *see also Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1297 (Fed. Cir. 2014) (“The strong presumption created by not including means in a claim limitation provides clarity and

predictability for the public and the patentee alike. It helps the public determine when claim elements are expressly limited to structures disclosed in the specification (or their equivalents) and provides the patentee with the tools for reliably invoking or avoiding means-plus-function claiming. It also signals to the court that the patentee has chosen to avail, or avoid, the benefits of Section 112, ¶ 6.”).

In *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206 (Fed. Cir. 1998), the Federal Circuit examined a patent for an electro-mechanical lock. The disputed claim term was a “lever moving element for moving the lever.” The court held that the term failed sufficiently to describe structure and was in means-plus-function form, despite the absence of the word “means.” The court assumed that the term “element” was nonstructural. *See id.* at 1213–14. “Element” was preceded by the modifier “lever moving,” which described a function, not a structure. The specification did not define the term “lever moving element” as a structure. *Id.* at 1214. There was no dictionary definition of “element” suggesting structure, and no structural meaning for the term in the relevant-art sources. The court concluded that the nonstructural term “element” was modified only by functional language, defeating the presumption against finding means-plus-function form. *Id.*

The Federal Circuit in *Lighting World* distinguished *Mas-Hamilton* in concluding that “connector assembly” sufficiently described structure to avoid § 112 ¶ 6, while “lever moving element” did not. *See Lighting World*, 382 F.3d at 1363. The term “connector assembly,” unlike “lever moving element,” had a structural definition understood in the relevant art and defined in the patent specification, dictionaries, and expert testimony. *Id.* And the patent history in *Mas-Hamilton* showed that the patentee “had used the terms ‘member,’ ‘element,’ and ‘means’ interchangeably, and in the patent itself the patentee described the ‘lever moving element’ and

the ‘movable link member’ as the ‘[m]eans . . . for’ moving the lever, and the ‘[m]eans . . . for reasonably maintaining the pivotable lever in a position substantially disengaged.’” *Id.* at 1362 (brackets and omissions in the original).

Two other Federal Circuit cases are also instructive. In *MIT v. Abacus Software*, 462 F.3d 1344, 1355 (Fed. Cir. 2006), the court held that the term “colorant selection mechanism for receiving said modified appearance signals and for selecting corresponding reproduction signals representing values of said reproducing colorants” rebutted the presumption against means-plus-function construction because the claim used the nonstructural term “mechanism,” preceded by the nonstructural modifier “colorant selection.” The specification did not denote “colorant selection” as a structure. “Colorant selection” had no dictionary definition signifying structure and no known structural meaning in the art. *Id.* at 1354. The claim was in means-plus-function form despite the absence of the word “means.”

The Federal Circuit reached the same result in *Welker Bearing Co. v. PHD, Inc.*, 550 F.3d 1090 (Fed. Cir. 2008). Construing the claim term “mechanism for moving said finger,” the court held that the term “mechanism” was neither structural nor modified by a structural term. *Id.* at 1096–97. Instead, the functional term “for moving” modified the word “mechanism.” The term “said finger” was structural, but “said finger” did not modify, and could not be used to define, “mechanism.” A person of ordinary skill in the art “would have no recourse but to turn to the . . . specification to derive a structural connotation for . . . ‘mechanism for moving said finger.’” *Id.* at 1096. The court noted that its conclusion might have been different if the patent provided a structural context for the meaning of “mechanism.” For example, the patent could have used terms such as “finger displacement mechanism,” “lateral projection/retraction mechanism,” or “clamping finger actuator.” *Id.* at 1096. Had those terms been used, the “court

could have inquired beyond the vague term ‘mechanism’ to discern the understanding of one of skill in the art. If that artisan would have understood such language to include a structural component, th[e] court’s analysis may well have turned out differently.” *Id.* at 1096–97. But instead of using language denoting structure, “the applicant chose to express this claim element as ‘a means or step for performing a specified function without the recital of structure, material, or acts in support thereof.’” *Id.* at 1097 (quoting 35 U.S.C. § 112 ¶ 6).

The following chart summarizes the disputed terms in these cases and the Federal Circuit’s constructions:

| Case   | Disputed Term  | Means-Plus-Function |
|--|--|---------------------|
| <i>Greenberg v. Ethicon Endo-Surgery, Inc.</i> , 91 F.3d 1580 (Fed. Cir. 1996)                   | “detent mechanism defining the conjoint rotation”  | No                  |
| <i>Lighting World, Inc. v. Birchwood Lighting, Inc.</i> , 382 F.3d 1354 (Fed. Cir. 2004)         | “connector assembly for connecting each pair of adjacent support members”  | No                  |
| <i>Mas-Hamilton Group v. LaGard, Inc.</i> , 156 F.3d 1206 (Fed. Cir. 1998)                       | “lever moving element for moving the lever”  | Yes                 |
| <i>Massachusetts Institute of Technology v. Abacus Software</i> , 462 F.3d 1344 (Fed. Cir. 2006) | “colorant selection mechanism for receiving said modified appearance signals and for selecting corresponding reproduction signals representing values of said reproducing colorants” | Yes                 |
| <i>Welker Bearing Co. v. PHD, Inc.</i> , 550 F.3d 1090 (Fed. Cir. 2008)                          | “mechanism for moving said finger”   | Yes                 |

The Federal Circuit’s guidance in *Greenberg*, *Lighting World*, *Mas-Hamilton*, *MIT*, and *Welker Bearing* indicates that a nonstructural term must be modified by a term connoting structure or having a structural meaning in the art to avoid a means-plus-function construction. These cases and the guidance they provide are applied to analyze whether the disputed claim

term, “tubular advancing station connected to said drilling superstructure for advancing tubular members,” denotes sufficiently definite structure to avoid invoking § 112 ¶ 6.

2. *Whether “tubular advancing station connected to said drilling superstructure for advancing tubular members” is in means-plus-function form*

Claim 17 of the ‘069 Patent claims a “tubular advancing station connected to said drilling superstructure for advancing tubular members.” ‘069 Patent, 17:22–23. The disputed language is not only “tubular advancing station,” but also “connected to said drilling superstructure” and the functional language, “for advancing tubular members.” In its briefs, Transocean focused on “tubular advancing station,” while Pacific focused on “tubular advancing station . . . for advancing tubular members.”

Neither the longer nor shorter version of the disputed term uses “means” or “means for.” The presumption against mean-plus-function construction applies. Transocean argues that Pacific cannot overcome this presumption. Transocean construes “tubular advancing station” to mean “an assembly of equipment capable of advancing tubular members to the seabed.” (Docket Entry No. 43-1 at 12). Transocean argues that a “station” is a place where the equipment capable of performing a certain function is collected, and that this connotes sufficient structure to maintain the presumption. (Docket Entry No. 24, at 23 (“A person of ordinary skill understands that tubular advancing station, or the other synonyms used in the patent like drilling station or rotary station refers to a specific location on a drilling rig with equipment needed to advance tubulars to the seabed.” (citing ‘851 Patent, 8:41, 9:4)).

Transocean recognizes that the structure is defined in terms of what the equipment assembled there can do—advance tubular members. Transocean relies on *Lighting World*’s holding that “it is sufficient if the claim term is used in common parlance or by persons of skill

in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structure by their function.” 382 F.3d at 1359–60.

Pacific argues that the disputed term does not connote structure and instead is defined by the function it performs, making it a “classic” means-plus-function limitation. Pacific argues for a construction defining the function as “advancing tubular members” and the structure as “[e]quipment for hoisting (drawworks, cable, sheaves, and a traveling block), equipment for making up and breaking down tubular strings (iron roughneck, pipe tong, spinning chain, Kelly and/or rotary swivel), and optionally equipment for rotating tubular string (top drive or rotary table).” (Docket Entry No. 43–1 at 12–13).

The claim uses the term “station.” Transocean construes “station” as the place where equipment is collected; Pacific construes it as a vague term not denoting structure, like the term “element” in *Mas-Hamilton*. A frequently used dictionary defines “station” as follows:

- 1a: the place or position in which something or someone stands or is assigned to stand or remain
- 1b: any of the places in a manufacturing operation at which one part of the work is done
- 1c: equipment used usually by one person for performing a particular job
- 2: the act or manner of standing: posture
- 3: a stopping place: as
  - a(1): a regular stopping place in a transportation route <a bus station>
  - a(2): the building connected with such a stopping place : depot []
- b: one of the stations of the cross
- 4a: a post or sphere of duty or occupation
- 4b: a stock farm or ranch especially of Australia or New Zealand
- 5: standing, rank <a woman of high station>

- 6: a place for specialized observation and study of scientific phenomena <a seismological station> <a marine biological station>
- 7: a place established to provide a public service: as
  - a(1): fire station
  - a(2): police station
- b: a branch post office
- 8: gas station
- 9a: a complete assemblage of radio or television equipment for transmitting or receiving
- 9b: the place in which such a station is located.

MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 1219 (11th ed. 2003).

These definitions show that the common meaning of “station” includes meanings that connote structure. “Station” usually connotes structure when it means the location for performing certain operations or tasks (*see 1b above*), or the location for housing the equipment needed to perform operations or tasks (*see 7(a)(1), 7(a)(2), and 7(b); 3(a)(2) above*), *see id.* at 1219.

Transocean analogizes “tubular advancing station” to “police stations, train stations, and work stations,” emphasizing that each is generally understood to connote structure. (*See Docket Entry No. 24 at 24*). Transocean is correct, but that is because a police station is among the places established for certain public services, like a fire station. Merriam-Webster defines a police station as “the headquarters of the police for a particular locality.” MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 910; *see also id.* 467 (defining “fire station” as a “building housing fire apparatus and usually firemen”). A building, of course, denotes structure.

The word “station” by itself also has meanings that do not connote structure, such as a location or place where someone stands, “a post or sphere of duty or occupation,” and “standing

rank.” *Id.* Pacific argues that “station” is similar to such generic terms as “‘mechanism,’ ‘means,’ ‘element,’ and ‘device,’ [that] typically do not connote sufficiently definite structure,” *see MIT*, 462 F.3d at 1354, and therefore trigger § 112 ¶ 6.<sup>11</sup> Transocean argues that claim language further defines the terms and adds sufficient structure to avoid 112 ¶ 6. *MIT*, 462 F.3d at 1354.<sup>12</sup>

The modifying words “tubular advancing” precede the disputed term “station.” If “station” does not connote sufficiently definite structure, does adding the modifying words “tubular advancing” connote sufficient structure to one skilled in the relevant art? Transocean argues that a skilled person, such as a worker on an offshore oil rig or drilling ship, would know that “tubular advancing station” is the collection of equipment needed to advance the tubular members or the place on the rig where that equipment is housed. Unlike the modifying words in *Greenberg* and *Lighting World*, the modifying words “tubular advancing” do not have dictionary or other definitions that provide guidance. The court has not found in the record an industry dictionary, treatise, inventor testimony, rigworker testimony, or other evidence that the meaning of “tubular advancing station” is understood in the relevant art to denote structure. *Cf. Welker Bearing*, 550 F.3d at 1096–97 (stating that the “court’s analysis may well have turned out

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<sup>11</sup> Pacific cited *Bemis Manufacturing Co. v. Dornoch Medical Systems*, No. 98-cv-952, 2000 U.S. Dist. LEXIS 21768 (E.D. Wis. Aug. 30, 2000), for the proposition that “station” fails to sufficiently denote structure. In *Bemis*, the issue was whether the term, “a cleaning station for . . . automatically draining and cleaning said suction canister after said suction port is disconnected from the vacuum source and said patient port is disconnected from the patient,” was in means-plus-function form. The district court held that it was. *Id.* at \*24. The decision’s usefulness in the present case is limited due to the fact that the court did not explain why it concluded that “cleaning station” failed to denote sufficient structure. The court did not analyze the disputed term, either standing alone or in light of the case law, dictionary definitions, and prosecution history.

<sup>12</sup> In *Greenberg*, the modifying noun “detent” “denote[d] a type of device with a generally understood meaning in the mechanical arts, even though the definitions are expressed in functional terms.” *Greenberg*, 91 F.3d at 1583. The court noted that multiple dictionaries defined “detent” and that a person of ordinary skill in the mechanical arts would know that it denoted a type of device and connoted structure. *Id.* Similarly, in *Lighting World*, the court looked to dictionaries and concluded that the “connector” modifying “mechanism” has a “reasonably well-understood meaning as a name for structure, even though the structure is defined in terms of the function it performs.” 382 F.3d at 1361.

differently” had the “artisan . . . understood [the claim] language to include a structural component”).

Transocean argues that a place where equipment needed to perform a certain function is assembled denotes sufficiently definite structure because the place requires structure to hold the equipment and the space for operating it. (See Docket Entry No. 31 at 21). Transocean does not cite a case holding that the place the equipment needed for a certain task or operation is kept connotes sufficiently definite structure.

Pacific’s position that the claim invoked § 112 ¶ 6 is not without support. The patent language and prosecution histories provide some support that the disputed term is properly construed as a means-plus-function claim. Claim 17 of the ‘069 Patent claims:

a first tubular advancing station connected to said drilling superstructure for advancing tubular members . . . [and] a second tubular advancing station connected to said drilling superstructure for advancing tubular members simultaneously with said first tubular advancing station to the seabed . . .

‘069 Patent, 17:22–29. Claim 38 of the ‘071 Patent contains nearly identical language, but uses “tubular advancing station” interchangeably with “means for advancing tubular members.” The relevant claim language is:

a first tubular advancing station connected to said interconnected drilling superstructure for advancing tubular members . . . and a second tubular advancing station connected to said interconnected drilling superstructure for advancing tubular members simultaneously with said *means for advancing tubular members* . . . [which] can be simultaneously conducted . . . by said *second means for advancing tubular members*.

‘071 Patent, 20:11–26 (emphasis added). Both claims are about the same function, advancing tubular members. Both claims use the terms “tubular advancing station” and “means for advancing tubular members” interchangeably. This supports an inference that “tubular advancing station” is a proxy for the term “means for.”

The prosecution history of the ‘851 Patent also provides some evidence that the patentees intended to use “tubular advancing station” and “means for” interchangeably. If, during the prosecution history, a patentee interchangeably uses “means” and another term, that is a factor in determining whether a means-plus-function construction applies to that term. *See Lighting World*, 382 F.3d at 1362–63; *Mas-Hamilton Grp. v. LaGard, Inc.*, 21 F. Supp. 2d 700, 724 (E.D. Ky. 1997), *aff’d*, 156 F.3d 1206 (Fed. Cir. 1998). The prosecution history was important to the *Lighting World* and *Mas-Hamilton* courts in analyzing whether the disputed claim terms were in means-plus-function form. The *Lighting World* court distinguished the prosecution history of the patent at issue with that in *Mas-Hamilton*. *See Lighting World*, 382 F.3d at 1362. In *Mas-Hamilton*, the fact that the patentee had used the disputed claim term “element” interchangeably with “means” was important to the court’s conclusion that § 112 ¶ 6 applied despite the absence of “means for” language. The interchangeable use weighed in favor of finding that “element” and “member” “were mere proxies for the term ‘means for.’” *Lighting World*, 382 F.3d at 1362 (examining *Mas-Hamilton*). The interchangeable use overcame the “presumption flowing from the absence of the term ‘means for.’” *Id.* at 1358, 1363. The absence of such interchangeable use in the *Lighting World* patent’s prosecution history led the court to maintain the presumption against applying § 112 ¶ 6. *Id.* at 1363.

Similar to the patentees’ use of the term “element” in *Mas-Hamilton*, the patentees here appear to have used the term “station” interchangeably with “means” during the patent

prosecution. In the May 1997 examiner’s interview about the ‘851 Patent’s prosecution, the interviewer stated that certain claims would “define over” the prior art if they were “amended to specify the simultaneous advancement of tubular members *by first and second means*.” (Docket Entry No. 26, Ex. 21 at PAC 896) (emphasis added). The same claims were amended in July 1997, but the patentees used the term “tubular station,” not “means,” providing some evidence that they used “station” interchangeably with “means.” (*Id.* Ex. 5 at PAC 903–904). Transocean maintains that such use of the terms was “strategic.” (Docket Entry No. 31 at 20-21). It is unclear why Transocean’s explanation, without further evidence, is a basis to disregard or discount this apparent interchangeable use of the terms.

But this use, even with Pacific’s other evidence, is insufficient to rebut the strong presumption against construing claims not using “means” or “means for” as means-plus-function claims. *See Lighting World*, 382 F.3d at 1358. In *Williamson v. Citrix Online, LLC*, 770 F.3d 1371 (Fed. Cir. 2014), the Federal Circuit reversed the district court’s construction of “distributed learning control module” as a means-plus-function claim in part because it “failed to consider the claimed expression ‘distributed learning control module’ as a whole.” *Id.* at 1380. The Federal Circuit noted that the disputed phrase was “claimed as a part of the definite structure ‘distributed learning server’ and ‘receive[s] communications transmitted between the presenter and the audience member computer systems,’ ‘relay[s] the communications to an intended receiving computing system,’ and ‘coordinat[es] the operation of the streaming data module.’” *Id.* Taken together, the Federal Circuit concluded, “[t]hese claimed interconnections and intercommunications support[ed] the conclusion that one of ordinary skill in the art would understand the expression ‘distributed learning control module’ to connote structure.” *Id.*

Even if the three-word term “tubular advancing station” does not itself denote sufficiently

definite structure, when those words are viewed in light of the entire disputed term, one of ordinary skill in the relevant art would understand the term to denote a definite structure. The full term is “tubular advancing station connected to said drilling superstructure for advancing tubular members.” ‘069 Patent, 17:23–24. The fact that “tubular advancing station” is limited to one that is “*connected to said drilling superstructure*” denotes structure, not merely location. The specification also discloses multiple structural embodiments of tubular advancing stations and explains their operation. In some embodiments, the tubular advancing stations include “a first rotary table and a second, substantially identical, rotary table.” *See* ‘069 Patent, at 6:66-7:5, Figs. 7, 9-12, 14. In others, the tubular advancing stations are depicted as “a rotary machine, rotary drive, master bushings, kelly drive bushings and slips.” *Id.* at 6:66-7:19. The specification supports the conclusion that the term connotes sufficiently definite structure. *See Flo Healthcare Solutions, LLC v. Kappos*, 697 F.3d 1367, 1374-75 (Fed. Cir. 2012) (written description’s use of “height adjustment mechanism” to designate a class of structures including “a rack and pinion mechanism, a cable and pulley mechanism, a ratchet mechanism, a ball screw mechanism, a removable pin and holes arrangement” confirms that the term does not invoke § 112, ¶ 6).

The court concludes that “tubular advancing station connected to said drilling superstructure” connotes a sufficiently definite structure to maintain the presumption against a means-plus-function construction. When viewed in light of the strong presumption against applying § 112 ¶ 6 when the patentee omits the words “means for,” *see Lighting World*, 382 F.3d at 1358, there is insufficient evidence that the presumption has been rebutted. *See Williamson*, 770 F.3d at 1379-80; *Inventio AG v. ThyssenKrupp Elevator Americas Corp.*, 649 F.3d 1350, 1359-60 (Fed Cir. 2011) (concluding that the alleged infringer had “not rebutted the presumption

that the claimed ‘computing unit’ connotes sufficiently definite structure to those of skill in the art” in part because the claims recited that the computing unit was “connected to” a “modernizing device” and “the floor terminals of the elevator system”).<sup>13</sup> The claim language stating that the “tubular advancing station” is “connected to said drilling superstructure” connotes sufficiently definite structure to avoid invoking § 112 ¶ 6.

The court construes “tubular advancing station connected to said drilling superstructure for advancing tubular members” to mean “an assembly of equipment for advancing tubular members to the seabed.”

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<sup>13</sup> To the extent that Pacific relies on *Aspex Eyewear, Inc. v. Altair Eyewear, Inc.*, 288 F. App’x 697 (Fed. Cir. 2008) in arguing that the tubular advancing station’s connection to the drilling superstructure does not connote structure, that case does not require the result Pacific seeks. As one district court recently observed, “Aspex is an unpublished case” and “more recent Federal Circuit authority suggests that Aspex should be limited to its facts.” *Asetek Holdings, Inc. v. CoolIT Sys. Inc.*, 2013 WL 6326619, at \*9 (N.D. Cal. Dec. 3, 2013) (citing *Flo Healthcare Solutions, LLC v. Kappos*, 697 F.3d 1367, 1374-75 (Fed. Cir. 2012) (holding that “height adjustment mechanism” was not a means-plus function limitation)).

C. “Means . . . for transferring tubular assemblies.”<sup>14</sup>

| Transocean’s Proposed Construction   | Pacific’s Proposed Construction  |
|--|--|
| <p>A means-plus-function term governed by § 112 ¶ 6.</p> <p><u>Function</u>: transferring tubular assemblies directly between advancing stations or indirectly through a setback envelope.</p> <p><u>Structure</u>: overhead derrick crane, rail supported pipe handlers, or equivalent structure.</p> | <p>A means-plus-function term governed by § 112 ¶ 6.</p> <p><u>Function</u>: transferring tubular assemblies on or over the drill floor level directly between the first means for advancing tubular members [a first top drive station] and the second means for advancing tubular members [second top drive station].</p> <p><u>Structure</u>: Overhead derrick cranes or rail supported pipe handlers within the drilling superstructure [derrick].</p> |

The parties dispute the construction of “means . . . for transferring tubular assemblies” in claim 10 of the ‘851 Patent and claims 10 and 30 of the ‘781 Patent. The parties agree that the term is a means-plus-function claim governed by § 112 ¶ 6. They also agree that the function is to transfer tubular assemblies between advancing stations and that the structures corresponding to the function include rail-supported pipe handlers and overhead cranes. (See Docket Entry No. 43-1, at 2–3).

The parties disagree on two points. The first dispute is whether the function is limited to “direct” transfers between the two assemblies, as Pacific contends, or whether the function covers indirect transfers in which the tubular assemblies are moved from one station to another through an intermediate storage area called a “setback envelope,” as Transocean contends. The

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<sup>14</sup> To the extent Transocean asks the court to construe “transfer” as a stand-alone term, the court declines. The substance of the parties’ disputes does not appear to be over the word “transfer,” but rather over the claims in which the word “transfer” appears. An example is “means . . . for transferring tubular assemblies.” This is consistent with the parties’ own approach, as evidenced by their filings relating to claim construction. (Docket Entry No. 37, at 22 & Ex. 55 (Transocean’s exchange of claim terms for construction, which did not include “transfer” as a stand-alone term; Docket Entry No. 18, Ex. B (joint claim-construction statement)). Whether the court construed “transfer” as a stand-alone term would not change the result here.

second dispute is whether the tubular-assembly transfers are limited to those occurring “on or above the drill floor level,” as Pacific contends, or whether they extend to transfers that are not so limited, as Transocean contends.

1. *Whether the claim covers indirect transfers*

The claim language and specification support Transocean’s argument that the term “means . . . for transferring tubular assemblies” covers indirect transfers of tubular assemblies through the intermediate-storage setback envelopes. The claims recite a transfer of tubular assemblies between the “first means for advancing tubular members” and the “second means for advancing tubular members.” ‘851 Patent, 14:35–37. The claim language identifies the starting point and ending point of the tubular assemblies’ path—the first and second means for advancing tubular members—but does not describe what happens in between. The claims do not limit the transfer to a direct path between the beginning and ending points. The claim language supports Transocean’s construction that “transfer” is not limited to direct transfers.

The specification in the ‘851 Patent also supports Transocean’s construction by describing indirect transfers of tubular members through the storage areas. The specification describes the process of “making up” different members, placing them in setback envelopes, and, when needed, transferring them from setback envelopes to the drill station. The specification states:

The main drilling station 160 is utilized to pick up and make up a thirty inch jetting assembly for jetting into the seabed and twenty six inch drilling assemblies *and places them within the derrick setback envelopes* for the auxiliary station 162 to run inside of thirty inch casing. The main rig then proceeds to makeup eighteen and three fourths inch wellhead and *stands it back in the derrick* for the twenty inch tubular casing run.

‘851 Patent, 8:41–48 (emphasis added). Other parts of the specification mention indirect transfers, in which the tubular assemblies are stored in setback envelopes. ‘851 Patent, 7:28–29 (describing how each tubular handling assembly or pipe handling apparatus may “setback and receive conduit from any of the tubular setback envelopes 170, 172, and 174”); *id.* at 9:8–62 (describing an auxiliary rotary station making up various sizes of tubular members, which are stored in the setback envelopes or “derrick tubular handling envelopes” until they are transferred and advanced by the main station); *id.* at 12:13–18 (describing handling assemblies to transfer tubulars between tubular advancing stations and setback envelopes). The ‘781 Patent similarly mentions indirect transfers. *See, e.g.*, ‘781 Patent, 7:41–43 (“[T]he rail 168 permits the first tubular handling assembly 164 to setback and receive conduit from any of the tubular setback envelopes . . .”).

A timeline in the specification describing the drilling process further supports construing “means . . . for transferring tubular assemblies” to include indirect transfers. Figure 23b of the ‘851 and ‘781 Patents is a “time line for an illustrative exploratory drilling operation wherein a critical path of activity for a conventional drilling operation is depicted.” ‘851 Patent, 4:34–37; ‘781 Patent, 4:45–47. The timeline shows that the tubulars are first made up, then stored, in setback envelopes. The tubulars are later moved to the drill station for drilling and advancement towards the seabed. This timeline does not describe a process in which the tubular members are only transferred directly from the first means for advancing to the second means for advancing.

Pacific’s proposed construction limited to direct transfers contradicts the specification. The specification is not only “highly relevant,” but “[u]sually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Pacific’s construction also fails to justify construing the claim to

exclude the preferred embodiment. That approach “is rarely, if ever, correct.” *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001) (quoting *Vitronics*, 90 F.3d at 1583). Pacific does not dispute that the preferred embodiments of the Transocean patents include indirect transfers. The specification provides persuasive intrinsic evidence supporting Transocean’s construction.

Pacific also contends that indirect transfers through and including setback envelopes are not included in the “means . . . for transferring” because the envelopes, which are necessary for indirect transfer, are referred to in the dependent claims, but not in the independent claims the court is asked to construe. (Docket Entry No. 26 at 33-36). Claim 10 of the ‘851 Patent—the independent claim—recites a “means . . . for transferring tubular assemblies.” ‘851 Patent, 14:32-44. Claim 11—the dependent claim—recites:

“A multi-activity drilling assembly as defined in claim 10 and further including: a first tubular setback station positioned adjacent to said first means for advancing tubular members; and a second tubular setback station . . . .”

*Id.* at 14:45-51. Similarly, in the ‘781 Patent, the setback envelopes are mentioned in dependent claims 12 and 13, but not in independent claims 10 and 30. Pacific argues that because the setback envelopes were first introduced in the dependent claims and preceded by the phrase “further including,” the envelopes (and the indirect transfers they implicate) cannot also be covered by the independent claims. Pacific reasons that “direct transfer and indirect transfer here are distinct because the necessary equipment for indirect transfer (setback envelopes) could not have existed in the ‘means for transferring’ term of the independent claims.” (Docket Entry No. 26, at 34).

Pacific’s position is inconsistent with the claim-construction principle that “dependent claims are presumed to be of narrower scope than the independent claims from which they

depend.” *AK Steel Corp. v. Sollac & Ugine*, 344 F.3d 1234, 1242 (Fed. Cir. 2003); *see also RF Del., Inc. v. Pac. Keystone Techs., Inc.*, 326 F.3d 1255, 1264 (Fed. Cir. 2003) (stating that an independent claim is usually construed to have a greater scope than its dependent claims); *cf.* 35 U.S.C. § 112, ¶ 4 (2000) (“[A] claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.”). Under Pacific’s proposed construction, the dependent claims would provide for indirect transfers and would be broader than the independent claims. The presumption is that independent claims are broader than dependent claims. *See AK Steel Corp.*, 344 F.3d at 1242 (concluding that two independent claims “must also encompass aluminum with up to about 10% silicon” even though they did not “contain any express limitation regarding the composition of the coating metal” because the dependent claims “expressly recite[d] ‘up to about 10% silicon’”).

The use in the dependent claims of “further limiting” does not undercut this conclusion or make the dependent claims superfluous, as Pacific contends. The independent claims describe a general means for transferring tubular assemblies between the advancing stations. The independent claims do not limit the transfers to direct or indirect. Consistent with the principle that dependent claims are narrower than the independent claims, the dependent claims in the Transocean patents further limit the independent claims by denoting the structure and the location used to facilitate the transfers for that structure, which provide for indirect transfers in a specific manner—through setback envelopes positioned adjacent to the top-drive stations.<sup>15</sup>

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<sup>15</sup> Pacific argues that the setback envelopes are additional structure for the “multi-activity drilling assembly” and “not merely clarifications of the existing structure for the ‘means for transferring’ terms.” (Docket Entry No. 26 at 34). “Setback envelopes” appear to refer to the “means for transferring.” The independent claim describes a “drilling assembly including” a “means . . . for transferring tubular assemblies.” ‘781 Patent, 14:33, 55–56. The references to setback envelopes in the dependent claims relate to the “means for transferring” the drilling assembly.

Pacific cites *Acacia Media Technologies Corp. v. New Destiny Internet Group*, 2007 WL 678317, at \*13 (N.D. Cal. Mar. 2, 2007), for the proposition that using “the phrase ‘further comprising’ . . . means that the elements of a [a dependent claim] are in addition to [the independent claim on which it depends].” *Id.* at \*13. But the *Acacia* court did not discuss the presumption that independent claims are broader than dependent claims.

Pacific argues that construing the independent claim to include both direct and indirect transfers in fact narrows, rather than broadens, the independent claim. The claim language does not support Pacific’s argument. Including indirect transfers as an infringing “means . . . for transferring tubular assemblies” does not exclude direct transfers as another infringing means.

Pacific cites *Wenger Manufacturing v. Coating Machinery Systems, Inc.*, 239 F.3d 1225 (Fed. Cir. 2001), and *Chicago Board Options Exchange, Inc. v. Int’l Securities Exchange, LLC*, 677 F.3d 1361 (Fed. Cir. 2012), in support of its argument that the independent claim does not include indirect transfers, but both cases are distinguishable.

In *Wenger*, the district court construed “air circulation means” in the independent claim as a means-plus-function limitation requiring the function of “circulating air.” 239 F.3d at 1233 (emphasis in original). The district court concluded that the “‘structure corresponding to the function of circulating air through the apparatus requires the ability to recirculate air.’” *Id.* (quoting district court opinion). The Federal Circuit agreed with the district court that the function was “circulating air.” The Circuit disagreed with the construction that the corresponding structure required “recirculating,” finding that “the [district] court improperly restricted the ‘air circulation means’ limitation to structure that was disclosed in the preferred embodiment, but was not necessary to perform the recited function of circulating air.” *Id.* The Federal Circuit based its decision in part on the meaning of “the term ‘circulate,’” which “neither

connotes nor requires that the ‘air circulation means’ have structure capable of ‘recirculating,’ *i.e.*, circulating the air again after it has circulated once before.” *Id.* The Federal Circuit also based its decision on the doctrine of claim differentiation. “Because claim 3 [the dependent claim] recites a separate and distinct function (*i.e.*, “recirculating”), one that is not recited in claim 1 [the independent claim], the doctrine of claim differentiation indicates that these claims are presumptively different in scope.” *Id.* at 1234.

Here, by contrast, the dependent claim Pacific cites—claim 13 of the ‘781 Patent—does not “recite[] a separate and distinct function” from the “means . . . for transferring” limitation in independent claim 10. *See id.*; ‘781 Patent, 14:55-59, 15:20-25. Instead, claim 13 describes an indirect “system for transferring”—using setback envelopes—tubular assemblies between the first and second top drive stations. *See* ‘781 Patent, 15:20-25. Unlike the dependent claim in *Wegner*, claim 13 does not describe a system for “retransferring.” It describes a specific manner of transferring, not a function separate and distinct from transferring.

The other case Pacific cites, *Chicago Board Options Exchange*, is similarly inapplicable. That case concerned “whether and to what extent ‘matching’ and ‘allocating’ [were] distinct or of the same process,” as used in a business-method patent for automated stock-exchange processing. 677 F.3d at 1370. The independent claim recited a means-plus-function limitation “for allocating portions” of an incoming stock-purchase order or quotation. *See id.* The dependent claim described an exchange that “further comprises means for matching the remaining portion” of the incoming order or quotation. *Id.* The Federal Circuit concluded that “[t]hese claims indicate that ‘matching’ and ‘allocating’ are distinct because the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Id.* (quotations omitted).

Here, by contrast, the dependent claim uses the same term as the independent claim: “transferring.” As noted, both claims describe a manner of transferring tubular assemblies indirectly, not a distinct function. Unlike the patentees in *Chicago Board*, “Transocean is not trying to *limit* the broad transfer in the independent claim with indirect transfer from the dependent claims. . . . Instead, Transocean seeks to apply the general principle that the independent claim is at least as broad as its dependent claims which has the additional limitations related to indirect transfer.” (Docket Entry No. 31, at 24).

The court construes the term “means . . . for transferring tubular assemblies” to include indirect transfers.

## 2. *Whether the claims provide for transfers below the drill floor*

Pacific argues that the claims cover only tubular assembly transfers that occur on or above the drill floor. Transocean agrees with Pacific that the transfer must start and end at the tubular advancing stations above the drill floor, but disputes whether the entire transfer path must be on or above the drill floor. (Docket Entry No. 31 at 25 (“While Transocean agrees that any transfer must start and end at the stations on the drill floor, nothing in the specification limits the path taken by a transferred tubular to completely above the drill floor.”)). Transocean emphasizes that no language in the claims or specification limits the transfers to those occurring on or above the drill floor.

Pacific does not point to claim or specification language expressly excluding transfer paths that are partially below the drill floor. Pacific instead argues that the court should read this limit into the claims because “the specification only discloses transferring above the drill floor.” (Docket Entry No. 26 at 32) (emphasis removed). Pacific emphasizes that Figure 7 of the ‘851 Patent shows the equipment mentioned in the specification corresponding to the function of

transferring tubular assemblies—rail-supported pipe handlers and overhead cranes—as on the drill floor. *See* ‘851 Patent, Figure 7. Pacific uses this figure as the basis for reading the specification to mean that Transocean has restricted transfers to those taking place entirely on or above the drill floor.

Figure 7 appears to be the only support in the specification for Pacific’s argument that tubular assemblies must be transferred entirely on or above the drill floor. There is no claim language limiting the transfers to those entirely on or above the drill floor. While “claims must be read in view of the specification . . . limitations from the specification are not to be read into the claims.” *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1326 (Fed. Cir. 2002). The fact that this is a means-plus-function claim does not change that analysis or the result. *Cf. Rodime PLC v. Seagate Tech., Inc.*, 174 F.3d 1294, 1303 (Fed. Cir. 1999) (reversing a district court decision reading limitations from the specification into a means-plus-function claim).

The parties focused their arguments on whether the inventors disclaimed below-the-drill floor transfers during patent prosecution. Pacific argues vigorously and primarily that Transocean is estopped by positions it took in prosecuting the patent from arguing that the claimed transfers can be partially below the drill floor. Pacific emphasizes the inventors’ statements, including testimony and declarations in prior patent-infringement trials, describing the inventions as limited to transfers on or above the drill floor. (Docket Entry No. 26 at 34–37). Transocean argues that Pacific has inaccurately described both the prosecution history and the context of the prior statements. (Docket Entry No. 31 at 25–28).

During the patent prosecution, questions were raised about prior art, specifically, the Maritime Hydraulics Twin RamRig. The patent office had initially rejected multiple claims in Transocean’s patents on the basis of prior-art anticipation. The RamRig’s sales brochure showed

“tubular racks for the various pipes used for drilling” and “pipe handling assemblies allow[ing] for transfer of pipes from one advancing means to the other.” (Docket Entry No. 31, Ex. 8, at 3). After the patent examiner rejected Transocean’s claims, one of the named inventors, Donald Ray, and prosecution counsel, Bradford Kyle, met with the examiner about the RamRig reference. The “Examiner Interview Summary Record” states, in part, that:

The distinction that applicant’s drillship allows for transfer of tubular members between first and second drilling assemblies was agreed to define over the . . . Maritime Hydraulics brochure.

(Docket Entry No. 26, Ex. 21 at PAC 919). After the interview, the claims were amended to include a limitation to a “means positioned within said derrick for transferring tubular assemblies.” (See, e.g., *id.*, Ex. 5 at PAC 921).

Transocean argues that the examiner initially rejected the invention on the erroneous belief that the Maritime Hydraulics Twin RamRig had disclosed pipe-handling assemblies that could transfer pipes between advancing means. According to Transocean, the RamRig brochure did not disclose transferring equipment. Transocean cites to a 1999 declaration from the inventors of its patents-in-suit stating that the RamRig “does not incorporate a principal aspect of the [Transocean] invention in that there is no method shown for transferring tubular members between the rotary tables.” (Docket Entry No. 31, Ex. 25 ¶ 4). Transocean also relies on the deposition of Vidar Skjelbred, a Maritime Hydraulics employee familiar with the RamRig design. Skjelbred testified that the RamRig brochure did not identify or describe equipment capable of transferring long conductor pipe—up to 30 inches in diameter—above the drill floor. (*Id.*, Ex. 28 at 121–22). Instead, the pipe transfer shown in the RamRig brochure occurred exclusively below the drill floor. (*Id.*, Ex. 28 at 122).

Pacific's contends that it is clear from the "Examiner Interview Summary Record" excerpt and the subsequent amendments that the patentees disclaimed below-the-drill-floor transfers. Pacific relies heavily on inventor Ray's testimony in a lawsuit Transocean filed against GlobalSantaFe Corporation for infringing the same patents at issue in this case. In this earlier lawsuit, Ray testified that:

- he interpreted the excerpt from the "Examiner Interview Summary Record" to mean that Transocean's "invention has the capability to transfer the tubulars between the two workstations at the drill floor," (Docket Entry No. 26, Ex. 25 at 195–96);
- the phrase, "transfer of tubular members between first and second drilling assemblies" means transfer "between the two rotary tables on the drill floor," and the transfer must "take place on the drill floor in the derrick," (*id.*, Ex. 25 at 268);
- during the interview with the examiner, he showed the "transfer of tubulars at the drill floor" to explain the Transocean invention in comparison to the Maritime Hydraulics brochure, (*id.*, Ex. 25 at 265); and
- the discussion with the patent examiner "was about transferability above the drill floor," (*id.*, Ex. 25 at 228).

Inventor Robert Scott testified similarly in a deposition taken in a suit Transocean filed against Maersk Contractors USA alleging infringement of the patents at issue here. Scott testified that while the RamRig transferred the tubulars below the drill floor, "what was new [with the Transocean patents] was transfer above the drill floor." (*Id.*, Ex. 11 at 245–46).<sup>16</sup>

Pacific's reliance on these statements is problematic because inventor testimony "cannot be relied on to change the meaning of the claims." *Markman*, 52 F.3d at 983; *see also Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1580 (Fed. Cir. 1996) ("*Markman* requires us to give no deference to the testimony of the inventor about the meaning of the claims."). Courts

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<sup>16</sup> Pacific cites other trial and deposition testimony making similar points. (See Docket Entry No. 26 at 35–37). For brevity, the court omits citations to all those excerpts but notes that they are in the record and that the court is aware of them and has considered them.

recognize that “it is not unusual for there to be a significant difference between what an inventor thinks his patented invention is and what the ultimate scope of the claims is after allowance by the PTO.” *Howmedica Osteonics Corp. v. Wright Med. Tech., Inc.*, 540 F.3d 1337, 1347 (Fed. Cir. 2008) (internal quotations omitted). This is true even when the inventor testimony narrows the claim scope. *Id.*

Pacific argues that this principle is inapplicable because the inventors’ statements are about proceedings before the PTO and therefore part of the intrinsic record. (See Docket Entry No. 26 at 35 n.33). Even taking this into account, the inventors’ testimony does not lead to the construction Pacific advocates.

To show that Transocean disclaimed transfers below the drill floor, Pacific must show that Transocean’s conduct during the patent prosecution “constitute[d] a clear and unmistakable surrender” of any transfer path below the drill floor. *See Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d 1352, 1359 (Fed. Cir. 2003). In *Cordis*, the court held that an inventor did not clearly and unmistakably disclaim the disputed claim scope by a statement made after the examiner’s initial rejection, because the statement was “amenable to multiple reasonable interpretations.” *Id.*

The inventor statements Pacific points to are “amenable to multiple reasonable interpretations.” *Id.* The statements about above-the-drill-floor transfers were in response to questions about the specific differences between the transfer paths in the Transocean patents and in the RamRig prior art. Transocean takes the position that the inventors distinguished the Transocean patents from the RamRig on the ground that the transfer in the Transocean patents started and ended at a point above the drill floor. That is a reasonable interpretation of how the inventors distinguished the RamRig. The examiner’s handwritten summary does not explain the

specific reason for his change in position.<sup>17</sup> But it is reasonable to infer that the examiner distinguished the Transocean inventions from the RamRig prior art on the ground that the transfer in the Transocean patents begins and ends on or above the drill floor. It is reasonable to interpret the Transocean inventor statements to the PTO and in later testimony as saying that at least part (the beginning and ending) of the tubular-assembly transfer occurs on or above the drill floor, as opposed to saying that no part of the transfer could occur below the floor. Pacific has not shown that Transocean clearly and unmistakably surrendered a transfer path that is below the drill floor.<sup>18</sup>

The court construes “means . . . for transferring tubular assemblies” as a means-plus-function term governed by § 112 ¶ 6, with the function of “transferring tubular assemblies directly between advancing stations or indirectly through setback envelopes,” and the structure of “overhead derrick cranes, rail supported pipe handlers, or equivalent structure.”<sup>19</sup>

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<sup>17</sup> The record evidence is clear that the transfer of the casing pipe in the Maritime Hydraulics RamRig brochure occurred exclusively below the drill floor. The deposition testimony of Vidar Skjelbred confirmed this point; he testified that the RamRig did not have equipment capable of transferring above the drill floor the casing pipe that the brochure pictured. (Docket Entry No. 31, Ex. 28 at 121–22).

<sup>18</sup> For similar reasons, the court rejects Pacific’s argument that the doctrine of judicial estoppel bars Transocean from arguing that its patents apply to transfers below the drill floor. (Docket Entry No. 26, at 36 nn.34 & 35).

<sup>19</sup> Pacific disputes whether the structures corresponding to the function include not only rail-supported pipe handlers and overhead cranes, but also “equivalent structures.” Pacific cites an unpublished case from the Western District of Wisconsin for the proposition that “equivalents thereof” are not part of the structures corresponding to the function. (Docket Entry No. 26 at 37–38 (citing *LG Elecs., Inc. v. Quanta Computer Inc.*, No. 07-cv-361, 2008 WL 4613054, at \*3 (W.D. Wis. Mar. 4, 2008)). In *Quanta Computer*, the court declined to include “and equivalents thereof” in construing the structure of a means-plus-function term. The court explained that “§ 112 makes it clear that the ‘equivalents’ of the structures disclosed in the specification are included” and “including ‘equivalents’ in a construction conflates the issue of claim construction with an infringement analysis under the doctrine of equivalents.” *Id.*

Pacific’s argument appears contrary to the § 112 ¶ 6 statement that the “claim shall be construed to cover the corresponding structure . . . described in the specification and equivalents thereof.” See *NOMOS Corp. v. BrainLab USA, Inc.*, 357 F.3d 1364, 1368 (Fed. Cir. 2004) (defining the means-plus-function structure to include “equivalents”) (emphasis added). The court need not resolve this issue, however, because whether “equivalents thereof” are considered as part of the claim or are under the doctrine of equivalents does not affect the infringement analysis.

D. **Additional tubular transferring terms:** “assembly . . . operable to transfer tubular assemblies” and a “tubular handling system for transferring tubular assemblies between said first tubular setback envelope and said second tubular setback envelope and said first top drive station and said second top drive station.”

| Transocean’s Proposed Construction  | Pacific’s Proposed Construction   |
|---|---|
| Pipe handling equipment for transporting tubular members, such as overhead derrick cranes or rail supported handlers. | <p>A means-plus-function claim governed by § 112 ¶ 6.</p> <p><u>Function:</u> transferring tubular assemblies on or above the drill floor level directly between a first tubular advancing station and a second tubular advancing station.<sup>20</sup></p> <p><u>Structure:</u> Overhead derrick cranes or rail supported pipe handlers within the derrick</p> |

This court’s Memorandum and Order in *Stena* included a tentative ruling on the same terms in claim 17 of the ‘069 Patent and claim 13 of the ‘781 Patent. *See Stena*, 2014 WL 5460588, at \*26. As noted earlier, although Transocean and Stena filed supplemental briefs after the court’s opinion issued, and then settled before the final ruling. The tentative ruling and the supplemental filings are useful guidance.

The parties dispute the construction of two separate but related claims relating to tubular transfers. The first, an “assembly . . . operable to transfer tubular assemblies,” appears in claim 17 of the ‘069 Patent. The second, a “tubular handling system for transferring tubular assemblies

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<sup>20</sup> Pacific’s proposed construction for the function of “tubular handling system for transferring tubular assemblies” is slightly different from its proposed construction for “assembly . . . operable to transfer tubular assemblies.” Pacific’s proposed construction for “tubular handling system” includes references to setback envelopes. Its construction for “assembly . . . operable to transfer tubular assemblies” does not. Pacific’s construction of the structure corresponding to the “tubular handling system” is limited to structures “mounted on the drill floor.” (Docket Entry No. 43-1 at 9, 13). The distinctions between Pacific’s constructions for the two terms are without a difference in light of the court’s conclusion that the Transocean patents do not disclaim transfers occurring partially below the drill floor.

between said first tubular setback envelope and said second tubular setback envelope and said first top drive station and said second top drive station,” appears in claim 13 of the ‘781 Patent. The principal issue is whether the terms are in means-plus-function form. The parties’ arguments incorporate the sections of their briefs addressing whether a “tubular advancing station connected to said drilling superstructure for advancing tubular members” was in means-plus-function form. Given the similarities between an “assembly . . . operable to transfer tubular members” and a “tubular handling system for transferring tubular assemblies,” and given the fact that the terms are analyzed under the same legal framework, the court discusses them together. The court concludes that both terms are in means-plus-function form.

1.       *“assembly . . . operable to transfer tubular assemblies.”*

Pacific asserts that the disputed claim term, “assembly . . . operable to transfer tubular assemblies,” is properly construed as a means-plus-function limitation subject to § 112 ¶ 6. This term is similar to the term addressed in the previous section, a “means . . . for transferring tubular assemblies.” Both claims relate to transferring tubular assemblies between the advancing stations. The parties agreed that the claim term “means . . . for transferring tubular assemblies” was in means-plus-function form. The material difference between “means . . . for transferring tubular assemblies,” and an “assembly . . . operable to transfer tubular assemblies” is the absence of the word “means” in the second. Because the “assembly . . . operable to transfer tubular assemblies” claim does not use “means” or “means for,” the presumption that the claim is not in mean-plus-function form applies. *See CCS Fitness Inc.*, 288 F.3d at 1369.

Transocean argues that Pacific cannot overcome the presumption, contending that one of skill in the relevant art would understand an “assembly . . . operable to transfer tubular assemblies” to denote sufficiently definite structure. Transocean argues that “assembly . . .

operable to transfer tubular assemblies” connotes structure because the word “assembly” is a noun. (Docket Entry No. 24 at 30 (“Pacific cannot rebut the presumption because the specification uses . . . nouns to identify structure used to move tubular assemblies.”)). “Assembly” is a noun, but just because a word is a noun does not mean that it denotes sufficiently definite structure.

The Federal Circuit has stated that nouns such as “mechanism,” “element,” “device,” and “system” are generic words that do not by themselves denote structure. *See MIT*, 462 F.3d at 1354 (“The generic terms ‘mechanism,’ ‘means,’ ‘element,’ and ‘device,’ typically do not connote sufficiently definite structure.”). The Federal Circuit in *Lighting World* suggested that the noun “assembly” by itself does not denote structure, when explaining in detail why “assembly” modified by the word “connector” did denote structure. *Lighting World*, 382 F.3d at 1361–62. That explanation would have been unnecessary had the word “assembly” standing alone denoted structure. The disputed claim “assembly . . . operable to transfer tubular assemblies” has no language modifying “assembly” similar to that in *Lighting World*. One of skill in the relevant art “would have no recourse but to turn to the . . . specification to derive a structural connotation for” the term “assembly . . . operable to transfer tubular assemblies.” *See Welker Bearing*, 550 F.3d at 1096.

Transocean cites *Stryker Corp. v. Zimmer, Inc.*, No. 10-cv-1223, 2012 WL 333814 (W.D. Mich. Feb. 1, 2012), in arguing that the word “assembly” alone denotes sufficiently definite structure to avoid invoking § 112 ¶ 6. The *Stryker* court ruled that claim terms using the word “assembly” were not in means-plus-function form. But in *Stryker*, the word “assembly” did not stand alone as it does in the present case. The *Stryker* court construed “lock assembly,” “control assembly,” and “switch assembly,” *see id.* at \*6–14. In these terms, other words modified

“assembly,” similar to the combination of “connector” and “assembly” in *Lighting World*. By contrast, no language connoting structure modifies an “assembly . . . operable to transfer tubular assemblies.” This case law supports Pacific’s argument that it met its burden to show that the term fails to denote sufficiently definite structure, rebutting the presumption against means-plus-function form.

Transocean also argues that the specification and prior art cited during the prosecution history use the term “assembly” to refer to structure. (Docket Entry No. 31, at 29). Transocean relies on the appearance of “assembly” in “tripod assemblies,” “rotary assemblies,” “support assemblies,” and “jacking assemblies.” (*Id.*). Transocean’s citation to those terms is unconvincing because, as in *Lighting World* and *Stryker*, other language modified “assembly” and connoted structure. There is no such modifying language in the term “assembly . . . operable to transfer tubular assemblies.”

The fact that the court found that the claim “tubular advancing station connected to said drilling superstructure for advancing tubular members” was not in means-plus-function form does not change the result. In the “tubular advancing station” claim, the “station” was “connected to said drilling superstructure.” As noted earlier, the fact that the tubular advancing station was connected to the drilling superstructure, in combination with other language, sufficiently denoted structure. The claim term, “assembly . . . operable to transfer tubular assemblies,” contains no similar language stating that the “assembly” is attached to the drilling superstructure.

The court construes the claim “assembly . . . operable to transfer tubular assemblies” to be in means-plus-function form. Because “assembly . . . operable to transfer tubular assemblies,” invokes § 112 ¶ 6, the court must identify the “function” associated with the claim

language and corresponding structure in the specification associated with that function. 35 U.S.C. § 112 ¶ 6; *Welker Bearing*, 550 F.3d at 1097.

It is undisputed that the function is to transfer tubular assemblies. Pacific argues that the transfer is limited to direct transfers above the drill floor, repeating the arguments it made in addressing the “means . . . for transferring tubular assemblies.” (See Docket Entry No. 26, at 39 n.40). For the reasons stated earlier, the court rejects Pacific’s argument that the claim is limited to direct transfers above the drill floor. The structure corresponding to the function includes overhead derrick cranes, rail-supported pipe handlers, and equivalent structure.

2. *“Tubular handling system for transferring tubular assemblies between said first tubular setback envelope and said second tubular setback envelope and said first top drive station and said second top drive station.”*

The parties’ arguments about “tubular handling system for transferring tubular assemblies” mirror those made about the term “assembly . . . operable to transfer tubular assemblies.” The absence of “means” or “means for” triggers the presumption that the claim is not in mean-plus-function form. *See CCS Fitness Inc.*, 288 F.3d at 1369.

The word “system” by itself does not denote sufficiently definite structure to avoid § 112 ¶ 6. The dictionary defines “system” as “a regularly interacting or interdependent group of items forming a unified whole.” *System*, def. 1, MERRIAM-WEBSTER, <http://www.merriam-webster.com/ dictionary/> (last visited September 3, 2013). “System” is thus similar to such generic terms as “‘mechanism,’ ‘means,’ ‘element,’ and ‘device,’ [that] typically do not connote sufficiently definite structure.” *See MIT*, 462 F.3d at 1354. At least one other court has concluded that “system” is a generic term that fails to denote sufficient structure to avoid invoking 112 ¶ 6. *Auto. Techs. Int’l, Inc. v. Delphi Corp.*, No. 08-cv-11048, 2009 WL 2960698, at \*13 (E.D. Mich. Sept. 11, 2009).

The modifying words “tubular handling” do not define the generic term “station” to add enough structure to avoid means-plus-function form. The record discloses no industry treatise or testimony from one skilled in the relevant art that a “tubular handling system” is understood to denote structure.

The conclusion that the claim term “tubular handling system for transferring tubular assemblies” is in means-plus-function form is supported by the difference between the term “tubular handling system for transferring tubular assemblies” and the term “tubular advancing station connected to said drilling superstructure for advancing tubular members,” which this court concluded was not in means-plus-function form. The term “tubular advancing station” included the words “connected to said drilling superstructure,” which in context denoted structure. The term construed here, “tubular handling system,” has no similar language denoting structure.

Transocean also argues that the “tubular handling system” term denotes sufficiently definite structure because claim 13 (in which “tubular handling system” appears) depends from claim 10 and “adds additional structure” to the “means for transferring tubular assemblies” set out in claim 10. Transocean argues that this “remov[es] the tubular handling system from the confines of Section 112 ¶ 6.” (Docket Entry No. 24, at 30). This argument presupposes that “tubular handling system” does add additional structure. The reasons stated above explain the court’s finding that the claim term “tubular handling system” fails to denote sufficient structure. The term does not “add[] additional structure” here.

The claim term “tubular handling system for transferring tubular assemblies between said first tubular setback envelope and said second tubular setback envelope and said first top drive station and said second top drive station” is in means-plus-function form. The function and its

corresponding structure mirror the function and structure for the term “assembly . . . operable to transfer tubular assemblies.”<sup>21</sup>

The court construes the disputed terms “assembly . . . operable to transfer tubular assemblies” and “tubular handling system for transferring tubular assemblies between said first tubular setback envelope and said second tubular setback envelope and said first top drive station and said second top drive station” as subject to a means-plus function limitation under § 112 ¶ 6. The function is “transferring tubular assemblies directly between advancing stations or indirectly through a setback envelope,” and the structure includes “overhead derrick cranes, rail supported pipe handlers, or equivalent structure.”

#### E. “A Well” and “the Well”

| Transocean’s Proposed Construction                | Pacific’s Proposed Construction |
|---|---------------------------------|
| Capable of performing operations on a single well | One or more wells               |

The parties dispute the meaning of “a well” in the ‘851 Patent (claim 10), the ‘781 Patent (claims 10, 30), the ‘069 Patent (claim 17), and “the well” in the ‘851 Patent (claim 10), the ‘781 Patent (claims 10, 30), and in the ‘069 Patent (claim 17). Transocean argues that “a well” or “the well” means “capable of performing operations on a single well.” Pacific argues that the terms mean “one or more wells.” (Docket Entry No. 43–1 at 1).

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<sup>21</sup> Pacific argues that this construction “renders the dependent claims superfluous.” (Docket Entry No. 26, at 34); *see also* 35 U.S.C. § 112, ¶ 4 (2000) (“[A] claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed.”). But because claim 13 applies only to indirect transfers through a setback envelope, it does further limit claim 10, which allows for either direct or indirect transfers. *See Probatter Sports, LLC v. Sports Tutor, Inc.*, 2014 WL 1315991, at \*8 (D. Conn. Mar. 31, 2014) (holding that “the later dependent claim requiring the AC drive motor should not be used to limit the prior independent claims that do not specify what type of drive motor is required”).

In *Transocean v. GlobalSantaFe*, No. 4:03-2910, the court construed the same terms in the ‘781 Patent, ‘071 Patent,<sup>17</sup> and ‘069 Patent. (Docket Entry No. 24, Ex. 6 at 7). The court in that case construed not only claim 14 of the ‘071 Patent, but also the other disputed claims containing the words “a well” and “the well.”

Claim 14 recited a:

multi-activity drilling assembly . . . for conducting drilling operations . . . for *a single well*, said multi-activity drilling assembly including:

an interconnected superstructure operable to be mounted upon a drilling deck for simultaneously supporting drilling operations *for a well* and operations auxiliary to drilling operations for *a well*.

‘071 Patent, 15:21–29 (emphasis added). The term “the well” appeared later in the claim, referring back to “a well.” *Id.* at 15:37, 40. GlobalSantaFe argued, as Transocean does now, that “a well” and “the well” were “expressly limited to . . . a single well.” (Docket Entry No. 24, Ex. 6 at 7 (internal quotations marks omitted)). Transocean argued then, as Pacific does now, that the term was not limited to a single well. *Id.* Transocean’s position has changed to what GlobalSantaFe argued earlier, and Pacific is taking the position Transocean took earlier.

In arguing in the present case that “a well” and “the well” should both be construed to mean “capable of performing operations on a single well,” Transocean fails to account for the claim-construction rule that indefinite articles such as “a” or “an” mean “one or more.” The Federal Circuit has repeatedly stated that, “as a general rule, the words ‘a’ or ‘an’ in a patent claim carry the meaning of ‘one or more.’” *TiVo, Inc. v. EchoStar Commc’ns Corp.*, 516 F.3d 1290, 1303 (Fed. Cir. 2008) (quoting *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338,

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<sup>17</sup> Transocean no longer asserts in this litigation that Pacific infringed the ‘071 Patent.

1342 (Fed. Cir. 2008)). This “is particularly true when those words are used in combination with the open-ended antecedent ‘comprising.’”<sup>18</sup> *Id.* “The exceptions to this rule are extremely limited: a patentee must evince a clear intent to limit ‘a’ or ‘an’ to ‘one.’” *Baldwin Graphic Sys., Inc.*, 512 F.3d at 1342 (internal quotation marks and citation omitted). “An exception to the general rule arises *only* ‘where the language of the claims themselves, the specification, or the prosecution history necessitate a departure from the rule.’” *01 Communique Lab., Inc. v. LogMeIn, Inc.*, 687 F.3d 1292, 1297 (Fed. Cir. 2012) (quoting *Baldwin Graphic Sys.*, 512 F.3d at 1342–43). “The subsequent use of definite articles ‘the’ or ‘said’ in a claim to refer back to the same claim term does not change the general plural rule, but simply reinvokes that non-singular meaning.” *Baldwin Graphic Sys.*, 512 F.3d at 1342.

In *GlobalSantaFe*, the exception applied to claim 14 of the ‘071 Patent because before using the terms “including,” “a well,” and “the well,” the claim used the term “single well.” The district court carefully reviewed the patent language and held that the term “single well” limited subsequent uses of “a well” and “the well” because these uses referred back to “single well.” (Docket Entry No. 24, Ex. 6 at 9). The court rejected Transocean’s proposed construction that “a well” and “the well” meant “one or more wells.” (*Id.*, Ex. 6 at 10).<sup>19</sup>

In the *Maersk* case, No. 07-cv-2392, Transocean alleged infringement of the ‘781, ‘071, ‘069, and ‘851 Patents. The parties asked the court to construe “single well,” “a wellhole,” and “the wellhole.” (No. 07-cv-2392, Docket Entry No. 22, Ex. A at 6). Transocean argued that in the context of apparatus claims, the terms meant “capable of performing operations on a single

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<sup>18</sup> The term “including” is synonymous with “comprising,” and its use triggers the same rule. *See Nazomi Commc’ns, Inc. v. Arm Holdings, PLC*, 403 F.3d 1364, 1370 (Fed. Cir. 2005); *Mars, Inc. v. H.J. Heinz Co.*, 377 F.3d 1369, 1375 (Fed. Cir. 2004).

<sup>19</sup> The court applied its analysis of claim 14 of the ‘071 Patent to the other disputed claims, stating that claim 14 “exemplified” the other disputed claims. (Docket Entry No. 24, Ex. 6 at 8–10).

well,” and in the context of method claims, “operations on a single well.” (*Id.*). Maersk argued for the limited construction Transocean advocates here, that the terms meant “all activity or structure of the claim can be conducted on only one wellhole.” (*Id.*). The court ruled, without explanation, that “the apparatus must be capable of operations on ‘a’ well and on other auxiliary operations related to the well—that could ‘include’ one or more wells.” (No. 08-cv-3287, Docket Entry No. 66, Ex. 8 at 22). The absence of any explanation makes this ruling unhelpful, and the case law and record make it unpersuasive.

The general rule in *Baldwin Graphic* and *TiVo* applies to the term “a well.” The analysis begins with the construction that “a well” means one or more wells. In *GlobalSanteFe*, the words “single well” before “a well” and “the well” meant that the same words after the transitional phrase “including” were limited by the earlier use of “single well.” In this case, by contrast, there is no basis in the claim language or the specification to deviate from the usual construction rule. *See Baldwin Graphic Sys.*, 512 F.3d at 1343. The term “single well” does not appear in the disputed claims. In the ‘851 Patent, the term “single well” does not appear at all. In the ‘781 and ‘069 Patents, the term does appear, but not in the disputed claims. The fact that the limiting term, “single well,” was not included in the disputed claims, but was included in other claims, is persuasive evidence that the inventors used the term “single well” to select when the claims would be limited to a single well and when they would not.

The inclusion of the term “the well” in the claims does not lead to a construction that “a well” is a single well. The term “the well” is “an anaphoric phrase that merely refers back to the initial antecedent phrase.” *Creative Internet Adver. Corp. v. YahooA, Inc.*, 476 F. App’x 724, 735 (Fed. Cir. 2011); *see also Baldwin Graphic Sys.*, 512 F.3d at 1343 (“Because the initial

phrase carries no definitive numerosity, the anaphoric phrases do not alter that meaning in the slightest.”).

Multiple parts of the specification support Pacific’s construction that “a well” and “the well” mean “one or more wells.” The ‘851 Patent specification describes drilling activity involving simultaneous work on multiple wells. *See* ‘851 Patent, 3:33–36 (“It is a further object of the invention to provide a novel method and apparatus for deep water field development drilling or work over remedial activity where multiple wells may be worked on simultaneously from a single derrick.”); *id.* at 11:51–56 (“Developmental drilling actively may be required which would involve twenty or more wells. In this event, the subject invention can advantageously conduct multiple well developmental drilling activity, or work over activity, simultaneously on multiple wells . . . .”).<sup>20</sup>

Transocean has not met its burden of showing that the inventors “evince[d] a clear intent to limit ‘a’ . . . to ‘one.’” *Baldwin Graphic*, 512 F.3d at 1342. The court construes the disputed claims “a well” and “the well” to mean “one or more wells.”

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<sup>20</sup> These references to simultaneous drilling pertain to developmental drilling. The developmental drilling phase occurs “after exploration has proven successful, and before full-scale production.” SCHLUMBERGER, *Oilfield Glossary*, [www.glossary.oilfield.slb.com/en/Terms/d/development](http://www.glossary.oilfield.slb.com/en/Terms/d/development) (last visited October 23, 2014).

F.     “Drilling Operations” and “Drilling Operations Auxiliary to Said Drilling Operations”

| Transocean’s Proposed Construction   | Pacific’s Proposed Construction |
|--|---------------------------------|
| <b>“drilling operations,” “drilling activity”</b>  |                                 |
| “operations required to construct a well”  | Indefinite                      |
| <b>“auxiliary drilling activity,” “drilling operations auxiliary to said drilling operations,” “operations auxiliary to drilling operations,” “operations . . . auxiliary to said drilling operations”</b> |                                 |
| “operations removed from the critical path for drilling a well”  | Indefinite                      |

The term “drilling operations” is found in claim 10 of the ‘851 Patent, claims 10, 11, and 30 of the ‘781 Patent, and claim 17 of the ‘069 Patent. Transocean asks this court to give “drilling operations” the same meaning as “drilling activity.”<sup>21</sup> Pacific contends that the record provides no support for this argument. The parties also ask the court to construe the term “drilling operations auxiliary to said drilling operations,” which appears in claim 10 of the ‘851 Patent, claim 30 of the ‘781 Patent, and claim 17 of the ‘069 Patent. Transocean argues that the terms “auxiliary drilling activity,” “operations auxiliary to drilling operations,” and “operations . . . auxiliary to said drilling operations” have the same meaning as “drilling operations auxiliary to said drilling operations.”<sup>22</sup>

Transocean argues that “drilling operations” and “drilling activity” have the same meaning because the patents use the terms interchangeably. Although Pacific contends that Transocean offers no support for this argument, (Docket Entry No. 26, at 21-22), the patents

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<sup>21</sup> The term “drilling activity” is found in claim 10 of the ‘851 Patent, claims 10 and 30 of the ‘781 Patent, and claim 17 of the ‘069 Patent.

<sup>22</sup> The claim term “auxiliary drilling activity” appears in claim 10 of the ‘851 Patent, claims 10 and 30 of the ‘781 patent, and claim 17 of the ‘069 patent. The term “operations auxiliary to drilling operations” appears in claim 10 of the ‘851 Patent, claims 10 and 30 of the ‘781 Patent, and claim 17 of the ‘069 Patent. The term “operations . . . auxiliary to said drilling operations” appear in claims 10 and 11 of the ‘781 Patent.

show interchangeable use.<sup>23</sup> The terms “drilling operations” and “drilling activity” are construed as having the same meaning. For simplicity, the term “drilling operations” is used to cover both. For similar reasons, the term “auxiliary drilling activity” covers “drilling operations auxiliary to said drilling operations,” “operations auxiliary to drilling operations,” and “operations . . . auxiliary to said drilling operations.”

Transocean distinguishes between “drilling operations” and “auxiliary drilling activity” by construing “drilling operations” as those on the “critical path” and “auxiliary drilling activity” as activity off the critical path. Pacific argues that the terms “drilling operations” and “auxiliary drilling activity” are so indefinite that one of ordinary skill in the art cannot differentiate between operations on and off the critical path. (Docket Entry No. 26 at 18-19). Transocean maintains that the terms are sufficiently definite that one of ordinary skill in the relevant art would be able to objectively identify whether and when particular drilling operations are on or off the critical path. (Docket Entry No. 31 at 9-11).

#### *1. The legal standard for indefiniteness*

Under 35 U.S.C. § 112, a patent specification must “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as [the] invention.” 35 U.S.C. § 112 ¶ 2. “[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform,

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<sup>23</sup> For example, the patents use “drilling operations” and “operations auxiliary to said drilling operations” to address the same methods and apparatuses as “drilling activity” and “auxiliary drilling activity.” Nothing from the claims or specification suggests that “drilling operations” and “drilling activity” have different meanings. *See, e.g.*, ‘069 Patent, 17:13–37 (“A multi-activity drilling assembly . . . for conducting *drilling operations* . . . including: a drilling superstructure operable to be mounted upon a drilling deck for simultaneously supporting *drilling operations* for a well and operations auxiliary to *drilling operations* for the well . . . and an assembly . . . to facilitate . . . drilling operations auxiliary to said *drilling operations*, wherein *drilling activity* can be conducted for the well from said drilling superstructure . . . and auxiliary *drilling activity* can be simultaneously conducted for the well from said drilling superstructure . . . .”) (emphasis added); ‘851 Patent, 3:58–51 (“simultaneously auxiliary drilling and/or related activity can be conducted within the same derrick”); 4:56–57 (“simultaneously operations auxiliary to primary tubular operations”); 6:65–66 (“operations auxiliary to drilling operations”); 3:56–57 (“operations auxiliary to the primary drilling”); 12:23–24 (“auxiliary operations can be simultaneously conducted”).

with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014). In *Nautilus*, the Supreme Court stated that indefiniteness under § 112 requires a “delicate balance.” *Id.* at 2129 (internal quotations omitted). “On the one hand, the definiteness requirement must take into account the inherent limitations of language. Some modicum of uncertainty, the Court has recognized, is the ‘price of ensuring the appropriate incentives for innovation.’” *Id.* (internal citation omitted) (quoting *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 732 (2002)). “Otherwise there would be [a] zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims.” *Id.* (alteration in the original; internal quotations omitted). The definiteness requirement “mandates clarity, while recognizing that absolute precision is unattainable.” *Id.*

The party arguing indefiniteness must show it by clear and convincing evidence. *Microsoft Corp. v. i4i Ltd. P’ship*, 131 S. Ct. 2238, 2242 (2011). “[C]laims are not indefinite merely because they present a difficult task of claim construction.” *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008). A claim is not indefinite “even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree.” *Id.* (quoting *Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001)). “Proof of indefiniteness requires such an exacting standard because claim construction often poses a difficult task over which expert witnesses, trial courts, and even the judges of [the Federal Circuit] may disagree.” *Id.* (internal quotation marks omitted).

The leading case for determining indefiniteness is *Orthokinetics Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565 (Fed. Cir. 1986). The patent in *Orthokinetics* involved pediatric wheelchairs designed to make it easier to load and unload a child from a vehicle. *Id.* at 1568.

The disputed claim described a wheelchair “wherein said front leg portion is *so dimensioned* as to be insertable through the space between the doorframe of an automobile and one of the seats thereof.” *Id.* (emphasis added). The issue was whether the term “so dimensioned” was indefinite. The Federal Circuit held that the term was sufficiently definite, reasoning that “one of ordinary skill in the art would easily have been able to determine the appropriate dimensions” by looking at the space available in the automobile and the size of the chair. *Id.* at 1576. While the term “so dimensioned” could have varying meanings based on automobile shapes and sizes, the meaning in a specific case was objectively identifiable to one skilled in the art. “The phrase ‘so dimensioned’ [was] as accurate as the subject matter permits, automobiles being of various sizes.” *Id.*

## 2. *Whether the disputed claims are indefinite*

Pacific argues that the claims are indefinite because there is no objective way to distinguish between drilling operations and auxiliary drilling activity based on which is on or off the critical path. Pacific argues that deciding which operations are on the critical path and which are not is left to the subjective understanding of each well operator. (Docket Entry No. 26 at 18). “In the absence of a workable objective standard,” a claim that is “completely dependent on a person’s subjective opinion” is indefinite. *See Datamize LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350 (Fed. Cir. 2005) (holding that the term “aesthetically pleasing” made the patent claims indefinite because that was aesthetically pleasing depended on each individual’s subjective response).

Transocean submitted inventor testimony and an expert report stating that one skilled in the relevant art understands what is on the critical path and what is not, enabling that person to distinguish between drilling operations and auxiliary drilling activity. Inventor Robert Hermann

testified in the *Maersk* trial and provided examples of how one skilled in the art would determine whether a given drilling operation is on the critical path. He testified that if it took ten days to drill a well's top hole but only seven days to "run" and lower the blowout preventer, drilling the top hole would be on the critical path and running the blowout preventer would be off. (Docket Entry No. 31, Ex. 17 at 543). He also explained how an operation on the critical path could switch to being off, and vice-versa, at different stages of an operations sequence, depending on the time it took to complete that operation. (*Id.*, Ex. 17 at 541). To illustrate this point, Hermann pointed to the hypothetical drilling schedule provided in Figure 23b of the patents. Under that schedule, running 20-inch pipe, allocated at 44 hours, was off the critical path while running the blowout preventer, allocated at 42 hours, was on the critical path. According to Hermann, if the time to run the 20-inch pipe significantly exceeded 44 hours, that operation would change from being off the critical path to on the critical path. (*Id.*, Ex. 17 at 544). Hermann testified that switching operations from on to off the critical path, or the other way around, is a "basic element of scheduling," and that he "never had problems with people understanding" it. (*Id.*).

Transocean also submitted the 2009 expert report of Calvin Barnhill to support the contention that "critical path" is understood in the relevant art. (Docket Entry No. 31, Ex. 18). Barnhill's report stated that "critical path" is not indefinite and that "one of ordinary skill in the art would have no problem understanding that 'critical path' describes how wells are planned and drilled." (*Id.*, Ex. 18 at 2). Barnhill noted that in the litigation between Transocean and GlobalSantaFe, the witnesses "did not express problems understanding" either critical path or auxiliary drilling activity. (*Id.*).

Hermann's testimony and Barnhill's expert report support Transocean's contention that one skilled in the relevant art can objectively distinguish between drilling operations and

auxiliary drilling activity based on which operation or activity is on the critical path. Hermann's testimony in particular shows that a drill operator using a multi-activity drilling rig can configure and reconfigure the sequence and schedule of drilling operations so as to change what is on the critical path. These changes do not, however, prevent a person of skill in the art from understanding, with reasonable certainty, whether a given operation is on the critical path. *See Nautilus*, 134 S. Ct. at 2124. The determination is not "completely dependent on a person's subjective opinion." *See Datamize*, 417 F.3d at 1350.

Dictionary definitions of "critical path" are consistent with the inventor testimony and expert report Transocean cited. One dictionary defines "critical path" as "the order in which a series of operations should be done so that a project can be finished as quickly as possible and for the lowest cost possible." *Critical Path*, MACMILLAN, <http://www.macmillandictionary.com/dictionary/american/critical-path> (last visited April 24, 2015). Another definition is a "path . . . that connects the tasks in a process which are required to be completed for subsequent work to start or which take the greatest amount of time for completion and that provides an estimate of the duration of the entire process." *Critical Path*, MERRIAM-WEBSTER, <http://www.merriam-webster.com/dictionary/critical path> (last visited April 24, 2015).

Though neither party cited patent or oil-industry treatises expressly defining "critical path," the term has an established project-management meaning that applies across disciplines and industries. This meaning is consistent with the dictionary definitions listed above. For example, Microsoft defines "critical path" as the "series of tasks that must be completed on schedule for a project to finish on schedule" and provides software enabling the user to diagram the critical path. *Show the critical path*, <https://support.office.com/en-US/article>Show-the-critical-path-10592326-5F31-4506-B7AF-C20FC97AB5A3> (last visited April 24, 2015). An

article from the online trade publication *TechRepublic* states that the “critical path” “is simply all the tasks that determine the end date in your project schedule. If one of those tasks is late by one day, then your project end date will be extended by one day.” Andrew Makar, *Why Critical Path is Critical to Project Management*, TECHREPUBLIC, <http://www.techrepublic.com/blog/tech-decision-maker/why-critical-path-is-critical-to-project-management> (last visited April 24, 2015).

These definitions of “critical path” are consistent with Hermann’s testimony and Barnhill’s report and support Transocean’s construction. They are also consistent with inventor Ray’s depositions from the *GlobalSantaFe* litigation and *Maersk* litigation. Ray testified in the *GlobalSantaFe* litigation that critical path “is a commonly used tool in the construction business.” (Docket Entry No. 26, Ex. 13 at 49–50). In the *Maersk* litigation, he testified that the term is “generally accepted in projects.” (*Id.*, Ex. 9 at 91). Because the term “critical path,” as applied to drilling operations, is capable of understanding by one skilled in the relevant art, it is distinguishable from the inherently subjective term “aesthetically pleasing” in *Datamize*, which the Federal Circuit held was indefinite. *See Datamize*, 417 F.3d at 1350.

Pacific argues that Barnhill’s deposition testimony in the *Maersk* case shows that the meaning of “auxiliary drilling activity” is subjective and left to each operator’s understanding. (Docket Entry No. 26 at 18). Barnhill testified that the operator does not “know exactly what’s auxiliary and what’s not auxiliary until [the operator is] actually planning the well.” (*Id.*, Ex. 8 at 126). But Barnhill’s testimony does not mean that “auxiliary drilling activity” lacks objective meaning. Instead, his testimony recognizes that although the specific drilling operations that are on or off the critical path can change over time, the operator understands the term’s meaning and can objectively tell which operations or activities are on or off the critical path at a particular time.

The fact that the operator may not know precisely what operations are auxiliary (off the critical path) until the drilling schedule or sequence has been planned or completed does not mean that one skilled in the art cannot objectively identify the critical path, drilling operations, and auxiliary drilling activity. The inventor testimony Pacific cites does not show that an artisan cannot objectively determine the critical path or what operations comprise it. Rather, the inventor testified that the artisan may not be able to make such a determination until the drilling schedule or sequence is planned or completed. In *Orthokinetics*, the term “so dimensioned” could not be determined until the space in the automobile was known. Similarly, what is on the critical path may not be known until the drilling operations schedule and sequence are known. *See Orthokinetics*, 806 F.3d at 1576. At that point, one skilled in the relevant art can objectively understand the drilling operations that are on and those that are off the critical path. (*See* Docket Entry No. 31, Ex. 17 at 544, Hermann Testimony).

Pacific also submitted testimony from inventor Scott that well operators may disagree on what activities are on or off the critical path. (Docket Entry No. 26, Ex. 11 at 65-66). Scott testified that “many operators have different ideas” and “[m]ajor operators have different ways of looking at” whether or not a particular activity is on the critical path, depending on their own internal requirements. (*Id.*, Ex. 11 at 65-66). The testimony is consistent with the other evidence that what is on or off the critical path can change depending on the specific drilling activities, the schedule for completion, and how that schedule may change over time.

Even if well operators may disagree about whether a particular operation is on or off the critical path, the possibility of such a disagreement does not mean that the claim is invalid for indefiniteness. The Federal Circuit is clear that a claim is not indefinite “even though [construing the term] may be formidable and the conclusion may be one over which reasonable

persons will disagree.” *Halliburton*, 514 F.3d at 1249 (quoting *Exxon Research & Eng’g.*, 265 F.3d at 1375). The testimony Pacific cites does not show that understanding the term “critical path” or what activities may be on or off the path at a particular time is “completely dependent on a person’s subjective opinion,” as was true of the term “aesthetically pleasing” in *Datamize*, 417 F.3d at 1350.<sup>25</sup>

Pacific also argues that the specification and one of the patent’s figures inconsistently describe whether the operations shown—running the blowout preventer and riser pipe—were on the critical path. Pacific compares Figure 23b, showing the blowout preventer and riser operations on the critical path, with language in the specification stating that the invention “enables” the operator to move these operations off the critical path. *See* ‘851 Patent, 12:25–27. The specification and Figure 23b are not inconsistent with each other or with a definiteness finding. Figure 23b is an “illustrative” timeline describing a drilling schedule and critical path. ‘851 Patent, 4:35. The language from the specification states only that the blowout preventer and riser can be moved off the critical path. The language in the specification does not require that all such activities be on, or off, the critical path at all times. As noted, the operations on the critical path can change depending on the drilling schedule or sequence. There is no inconsistency.

The record supports Transocean’s argument that a person skilled in the relevant art can determine the critical path and objectively differentiate between drilling operations and auxiliary drilling activity. The evidence that Pacific cites does not prove by clear and convincing evidence

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<sup>25</sup> Pacific points to inventor Ray’s deposition in *Transocean v. Maersk*, in which he testified that auxiliary drilling activity could be on the critical path. Pacific argues that this is inconsistent with Transocean’s proposed construction of auxiliary drilling activity as activity removed from the critical path. (Docket Entry No. 26 at 18-19). Ray’s testimony appears to contradict Transocean’s construction. But Ray’s statement, when viewed in light of the other evidence, does not constitute clear and convincing evidence that the claims are indefinite.

that one skilled in the relevant art would be unable to objectively determine which is which. Pacific has not carried its burden of demonstrating by clear and convincing evidence that the disputed terms “fail to inform, with reasonable certainty, those skilled in the art” whether a drilling operation is “auxiliary.” *Nautilus*, 134 S. Ct. at 2124. The disputed claims are not invalid for lack of definiteness.

The court construes the disputed terms “drilling operations” and “drilling activity” to mean “operations required to construct a well.” The court construes “auxiliary drilling activity,” “drilling operations auxiliary to said drilling operations,” “operations auxiliary to drilling operations,” and “operations . . . auxiliary to said drilling operations” to mean “operations removed from the critical path for drilling a well.”

## V. Conclusion

The disputed terms are construed as follows:

| Disputed Term   | Court's Construction   |
|---|--|
| <b>“a derrick”</b><br>(‘781 Patent, claim 10)   | “a single structure mounted upon a drilling deck that supports the load of drilling operations”  |
| <b>“a drilling superstructure”</b><br>(‘851 Patent, claims 10, 12; ‘781 Patent, claim 30; ‘069 Patent, claims 17, 19)                 |  |
| <b>“tubular advancing station connected to said drilling superstructure for advancing tubular members”</b><br>(‘069 Patent, claim 17) | “an assembly of equipment capable of advancing tubular members to the seabed”  |
| <b>“means . . . for transferring tubular assemblies”</b><br>(‘851 Patent, claim 10; ‘781 Patent, claims 10, 30)                       | A means-plus-function term governed by § 112 ¶ 6.<br><br><u>Function</u> : transferring tubular assemblies directly between advancing stations or indirectly through a setback envelope.<br><br><u>Structure</u> : overhead derrick cranes, rail supported pipe handlers, or equivalent structure. |
| <b>“assembly . . . operable to transfer tubular assemblies”</b><br>(‘069 Patent, claim 17)  | A means-plus-function term governed by § 112 ¶ 6.<br><br><u>Function</u> : transferring tubular assemblies directly between advancing stations or indirectly through a setback envelope.<br><br><u>Structure</u> : overhead derrick cranes, rail supported pipe handlers, or equivalent structure. |

|  |   |
|--|---|
| <p><b>“tubular handling system for transferring tubular assemblies between said first tubular setback envelope and said second tubular setback envelope and said first top drive station and said second top drive station”</b><br/>           (‘781 Patent, claim 13)</p> | <p>A means-plus-function term governed by § 112 ¶ 6.</p> <p><u>Function</u>: transferring tubular assemblies directly between advancing stations or indirectly through a setback envelope.</p> <p><u>Structure</u>: overhead derrick cranes, rail supported pipe handlers, or equivalent structure.</p> |
| <p><b>a “well”</b><br/>           (‘851 Patent, claim 10; ‘781 Patent, claims 10, 30; ‘069 Patent, claim 17)</p> <p><b>“the well”</b><br/>           (‘851 Patent, claim 10; ‘781 Patent, claims 10, 30; ‘069 Patent, claim 17)</p>  | <p>“one or more wells”</p>  |
| <p><b>“drilling operations”</b><br/>           (‘851 Patent, claim 10; ‘781 Patent, claims 10–11, 30; ‘069 Patent, claim 17)</p> <p><b>“drilling activity”</b><br/>           (‘851 Patent, claim 10; ‘781 Patent, claims 10, 30; ‘069 Patent, claim 17)</p>               | <p>“operations required to construct a well”</p>  |

|  |   |
|--|---|
| <b>“auxiliary drilling activity”</b><br>(‘851 Patent, claim 10; ‘781 Patent, claim 30; ‘069 Patent, claim 17)                                    |   |
| <b>“drilling operations auxiliary to said drilling operations”</b><br>(‘851 Patent, claim 10; ‘781 Patent, claims 30, 30; ‘069 Patent, claim 17) | “operations removed from the critical path for drilling a well” |
| <b>“operations auxiliary to drilling operations”</b><br>(‘851 Patent, claim 10; ‘781 Patent, claims 10, 30; ‘069 Patent, claim 17)               |   |
| <b>“operations . . . auxiliary to said drilling operations”</b><br>(‘781 Patent, claims 10–11)   |   |

The docket call scheduled for June 3, 2015, is cancelled. The parties are ordered to appear for a status conference on June 18, 2015, at 8:30 a.m., in Courtroom 11-B, 515 Rusk Avenue, Houston Texas, 77002.

SIGNED on May 27, 2015, at Houston, Texas.



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Lee H. Rosenthal  
United States District Judge